

1972

A study of first-time, full-time, Arts and Science students of 1966 in sixteen Iowa public community colleges

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A study of first-time, full-time, Arts and Science students
of 1966 in sixteen Iowa public community colleges

by

Donald Allen Fleming

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
DOCTOR OF PHILOSOPHY

Major: Education (Educational Administration)

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CHAPTER I: THE PROBLEM

Introduction

In his 1962 State of the Union Message to Congress, President John F. Kennedy said (65):

"If this nation is to grow in wisdom and strength, then every able high school graduate should have the the opportunity to develop his talents. Yet nearly half lack the funds or the facilities to attend college."

President Lyndon B. Johnson, in his 1965 report to Congress, indicated a similar interest in education when he commented:

"In the Great Society, work shall be an outlet for man's interests and desires. Each individual shall have full opportunity to use his capacities in employment which satisfies personally and contributes generally to the quality of the Nation's life" (67, p. 17).

The above statements indicate on the national level, the interest in providing educational opportunities for students who have completed high school and who need and want to develop their talents to a higher degree of proficiency. The educational policies commission in 1950 related the following statement as an indicator of the role of education in democracy. They said:

"A democratic society has obligations to provide opportunities for individuals to develop and use their talents, and the interests of society requires that such opportunities be made attractive, but no

one in a democracy can be compelled to use the opportunities available to him. The role of education in this connection is to equip the individual to use the opportunities that will best utilize his abilities and to guide him in making decisions that will serve both his own interests and those of society" (21, p. 3).

Not only must the country supply additional opportunities for high school graduates, but it must also be recognized the number of high school graduates in the country has been increasing. The U.S. Office of Education in the Digest of Educational Statistics, 1966, (68) released the figures below which indicate the percentages of 17 year olds who graduated from high school at various times in the twentieth century:

1900 - 6.4 percent

1910 - 8.8 percent

1930 - 29 percent

1940 - 50 percent

1965 - 72 percent

Figures projected in the U.S. Office of Education, Projections of Educational Statistics to 1977-78 (69) point to a high school graduating class of 3.7 million young people in 1977-78. This is over double the figures of 1.5 million in the 1957-58 and an increase of over 1 million from the 1967-68 school year.

Because of these large increases in high school graduates, a corresponding increase has taken place in higher education. According to the U.S. Office of Education projections students entering degree-

credit programs for the first time expanded from 723,879 young people in 1958 to 1,439,000 in 1957 and it is estimated the number will increase to 2,127,000 by 1977.

Due to the large inflow of students, institutions of higher education have expanded at a rapid rate. The growth of community college concept has not been an exception. Gleazer (29) reported that one out of five students began college work in a community college in 1958. By 1968 this ratio was one out of three and Gleazer projected it would soon be one out of two. It is presently estimated by the Department of Health, Education, and Welfare that 728,000 will begin their programs in community colleges by 1977. This represents a four fold increase over the 1957 enrollment of 167,000 students (69).

It is suggested by Marsee (45) that by 1985, 85 percent of the college population will begin their work in a community college. He points out that California community colleges account for 66 percent of all full-time college enrollment in that state and 82 percent of the part-time enrollment.

This rapid increase in growth of the community college has given rise to many questions. Medsker in 1960, (46) indicated that objective data regarding the community college was lacking. He pointed specifically to the transfer student area suggesting that little is known regarding the number of transfer students and the succeeding question of whether the community college is a terminal or transfer institution. Clark pointed to this lack of knowledge about community colleges when he indicated:

"Education is one of the major American institutions whose organized life has remained largely unanalyzed. A suitable body of knowledge exists now about the business firm, the government bureau, the trade union, the hospital, the political party, and special private association. In comparison, the church and the school have received little systematic study" (13, p. 37).

Knoell suggests a need for further studies.

"...in the junior colleges, where attrition is exceedingly high after only one year and where a large proportion of the students in transfer programs do not enter four-year institutions. One very important aspect of such an evaluation approach is an assessment of the long-term effects of failure among college students" (36, p. 70).

"It is fairly well established that a large percentage of the high school graduates who enter two-year colleges fail to complete certificate or associate degree programs. There is also reason to believe that many who enter with the intent to transfer do not do so. Neither our statistics nor our insights into the phenomenon of the junior college dropout are now adequate to the task of assessing this loss of talent" (36, p. 79).

The American Association of Junior Colleges in its forward to O'Connor's report on Follow-up Studies in the Community College sums up the status of the community college when it states:

"The most important person in a junior college is the student. What happens to the young man or woman while in the college and even after he or she is of primary concern to all who are involved in the educational process. The success of the institution can best be measured by the success of the student" (49).

The national expansion trend of the community college has been equally true in Iowa. The rate of expansion has accelerated in the

past years and concern about post high school education was shown in the passage of SF 515 by the 61st General Assembly. This act provided for the establishment of merged Area Community Colleges and Technical Institutes. Approximately one year later 15 of these merged districts had been formed, many of these areas absorbing the existing community colleges previously operated by local school districts.

With the rapid expansion of the community college movement in Iowa, the problems of inadequate information regarding the schools and the students enrolled are similar to those of the nation as a whole. Little is known about the Iowa community college student who enrolls in an Arts and Science program. Follow-up studies have generally dealt with students who have transferred to four-year colleges and universities and have usually been conducted on a single school basis. The study presented is an effort to provide data on a state-wide basis that will provide a look at the total entering student body, not a segment that transfers to another institution of higher education. The 1966 school year was selected to provide a four-year period between entrance in the community college and the study. This will provide an opportunity for the student not choosing to continue his education to become established in an occupation and will make it possible to ascertain the status of those students who chose to continue their education in a four-year institution at the completion of four years.

Statement of the Problem

The problem of this study was to determine the outcome of the students who enrolled in Arts and Science programs in the 16 Iowa community colleges in the fall of 1966. More specifically, the problem can be separated into several parts as follows:

1. To study the types of students who chose to enter the community college Arts and Science program.
2. To determine how long the student stayed in the Arts and Science program at the community college and how successful he was in the Arts and Science programs.
3. To determine what he did following his termination in the community college Arts and Science programs.
4. To determine some of his feelings concerning his stay at the community college.
5. To define a procedure for a continuing follow-up program for the Arts and Science programs in the community colleges of Iowa.

Purpose of the Study

The purpose of this study was to obtain from the students and the associated colleges data concerning the backgrounds and present status of the students involved, the additional purposes are:

1. To provide reliable information on a state wide basis regarding the Arts and Science students who enrolled in Iowa's public community colleges in the fall of 1966.
2. To obtain information regarding the success of students in Arts and Science programs.
3. To provide sufficient information to evaluate present programs and modify programs in existence.

4. To develop a state wide follow-up system of follow-up procedures for Arts and Science students.

Definition of Terms

To assist in classifying the meanings of the various terms used in this study, the following definitions are made:

Arts and Science Student - A student enrolled in a public community college in Iowa in a program that is composed of courses that would normally be used in a transfer program that would lead to a baccalaureate degree.

Iowa community college - Any of the public community college's in Iowa offering courses that would normally be used for transfer credit to a four year college.

Sources of Data

Data for the study were collected through a combined effort of Student Services personnel in the community colleges and the cooperation of the former students. Student Services personnel assisted in identifying the entering students in the fall of 1966 and providing data on the students that was available in the students permanent record. Further data was obtained from the students themselves through questionnaires and personnel interviews when necessary and feasible.

The scope of this investigation was confined to the random samples of students selected from entering students in the Arts and Science programs in the 16 Iowa community colleges in 1966. A total of

1,725 students were included in the study.

The information sought from the former students was as of spring 1971.

Organization of the Study

The material presented in this study was divided into five chapters. CHAPTER I includes an Introduction to the study, the Statement of the Problem, Definition of Terms, the purpose and scope of the study and Sources of Data. CHAPTER II contains a review and analysis of related literature and research. CHAPTER III contains information regarding the methodology and design for the study. CHAPTER IV includes a presentation and discussion of the data obtained. A Summary, a Conclusion, and Recommendations are presented in CHAPTER V.

Need for the Study

Iowa is no exception to the national picture. Little is known regarding who the student is and what happens to the student who enters the community college. Follow-up studies completed largely have dealt with graduates of programs and transfer students. Little research has faced the issue of providing information on all students who enroll in the community colleges of Iowa. This investigation is intended to provide a total picture of the community college student not just a small segment that graduated or transferred.

The results should be useful to community college personnel in the evaluation of the task they have undertaken. Implications for program and curriculum development should come from a picture of the total Arts and Science program.

It was thought that the best picture of the Arts and Science student body could be obtained if the beginning fall enrollment of 1966 were used.

This would provide a picture of a cross section of students, not the group that remained following some attrition.

CHAPTER II; REVIEW OF LITERATURE

Introduction

One of the primary aims of the community college is to provide, to the best of its ability, programs and services to the student enrolled that meet the needs and goals of that student and assist the student in reaching these goals. The community college has a more difficult task of achieving this aim than many four-year schools due to the diversity of social, economic, education, interest backgrounds, and a wide range of variance in the natural ability of those it serves.

Since any effort to adequately measure the success of a program must depend on both input and output of the system, it is felt a review of the literature relating to all aspects of the students attending the community college and drawing on information regarding other institutions as needed to show a complete picture would be a suitable approach.

The chapter is divided into three sections. The first of these deals with the enrollment picture as it has developed in the United States and Iowa. The second section relates to the description of the student while he is in attendance at the community college and what happens when he withdraws, either completing a program or withdrawal prior to completion and the third section provides a summary and conclusions of the literature reviewed.

Factors Involved in Enrollments in the Community College

College enrollments have been swelling at a rapid rate. This can be attributed to two factors. First, an increase in the percent of students graduating from high school who continue their education. According to Rudolph (57) 1.7 percent of the 18 to 21 year-olds in the United States were enrolled in colleges and universities. The projection for 1970 is that approximately 50 percent of this age range will be enrolled in higher education institutions. Second, an increase in the birth rate. Table 1 below shows a gradual increase in the birth rate from 105 per 1000 population in 1949 to a rate of 111 in 1953. The children born in the years 1949 to 1953 have been the young people who have entered college in the past few years and will enter in the immediate future. These birthrates point to an increasing pool of

Table 1. Live births per thousand native American women between the ages of 15 and 44 (66, p. 22)

Year of Birth	Births per 1000	Expected year of college entrance
1949	105	1967
1950	103	1968
1951	108	1969
1952	110	1970
1953	111	1971

young persons entering higher education. The division of this pool between the various types of institutions available to young persons

provides a basis for attempting to determine who attends a given institution of higher education. Bradley (9) provides a basis to begin consideration on a philosophical level, indicating that each institution of higher education has a unique set of characteristics that contribute to the type of student body the college attracts. The selection process on the part of the student then tends to expand the institution in the direction of these characteristics.

Historically, the community college has introduced another factor in the increasing number of students attending college. Bogue sums up this problem when he suggested:

"Some colleges will set certain selective standards for admission and retention of students, but community colleges will keep their doors open to any person, youth or adult, who can profit by what the colleges can offer, and the colleges will strive to offer what the people can profit by" (6, p. 482).

Roueché further points to the curriculum problems introduced by the open-door policy stating:

"The open-door policy of the community junior college implies acceptance of the concept of universal higher education. In accepting this ideal, the community college thus becomes committed to provide an education for all high school graduates and others who can profit from instruction" (56, p. VII).

Results of a study of Wisconsin's 1957 High School Graduates by Little (42) are shown in Table 2. Little used a questionnaire approach to obtain information regarding the post-high school plans of seniors who would be graduating at the end of the spring term in Wisconsin. One of the items included in the questionnaire involved the plans these students had for education beyond high school. In this group,

Table 2. Plans of the high school graduates (42, p. 8)

Percent of	Continuing		Total	Noncontinuing		
	Degree	Non-degree		Military - B Marriage - G	Job	Total
Boys	34	9	43	23	34	57
Girls	26	21	47	1	52	53
Totals	30	15	45	12	43	55

45 percent of the graduates were planning on continuing their education beyond high school as contrasted to 55 percent who were not planning on post-high school education of any type.

Trent and Medsker (65) gathering information through the use of a questionnaire, found that in the 16 communities surveyed, several variables influenced the selection of a college by a young person. On the basis of the 16 communities surveyed, the study revealed that in September following graduation 52 percent of the boys and 37 percent of the girls had enrolled in college with the highest percentages found in communities with community colleges. These same community colleges also drew a wider cross section of ability and socioeconomic level than other types of institutions.

Bashow (4) in his study of Florida counties with and without community colleges, determined through the use of enrollment data, found that a large percentage of high school graduates continue their education in communities where a community college is located.

In a state-wide study (24) of Florida community colleges, the

Florida Community Junior College Inter-Institutional Research Council made use of a questionnaire to follow-up entering freshmen in the fall of 1966. Based on a random sample of the total freshmen population that enrolled in 1966, 48 percent of the students reported one of the primary reasons for attendance at a particular community college was the proximity to the student's home.

The drawing power of the community college is also cited by Trent and Medsker (65). They found 53 percent of the academically able young people whose fathers worked at semi-skilled or unskilled jobs attended college if a community college was available in the home community while 22 percent from this group attended if the home community did not have a community college.

The picture in Iowa has shown a similar growth pattern to the national level with a slightly smaller growth ratio. Bakrow (3) concluded that a straight line increase of 0.6 percent in the 18-21 year-olds becoming college students was a slightly favored position over other forecasts. The results of this projection method are shown in Table 3. In the decade from 1960 - 1970, Bakrow suggested undergraduate enrollments in Iowa's colleges would increase about 75 percent going from 44,786 in 1960 to 76,414 in 1970. These figures have proved to be somewhat low. The 1970 enrollments as reported by the Association of Iowa Colleges and University President's report (2) indicate in excess of 103,000 persons enrolled in the colleges and universities in Iowa. With increasing enrollments and the trend toward a larger portion of the students spending their first two years in a community college,

Table 3. Predicted Iowa undergraduate college enrollments, 1960-1970, based on straight line increase of 0.6 percent as the percentage of 18- to 21-year olds becoming college students (3, p. 37)

Year	Total 18- to 21-year-olds ^a	Estimated percent of 18- to 21-year-olds attending college	College enrollment
1960	162,268	27.6	44,786
1961	165,592	28.2	46,697
1962	167,041	28.8	48,108
1963	166,054	29.4	48,820
1964	173,280	30.0	51,984
1965	187,699	30.6	57,436
1966	199,431	31.2	62,222
1967	214,542	31.8	68,224
1968	221,472	32.4	71,757
1969	224,506	33.0	74,087
1970	227,422	33.6	76,414

^aFigures taken from unpublished report by Ronald B. Thompson, 1958.

it becomes imparative that the success of programs in the community college is determined and necessary steps taken to correct defects that exist. Richards et al. (53) feel the community college will assume most of the burden of absorbing the large numbers of students who wish to enter higher education. In reviewing a number of studies relating to community college students, Roueche (56) concluded in 1968 that the composition of the community college student body make-up had changed drastically in the past 20 years. The function of the junior college to provide college transfer programs to a select group who were certain of finishing college has shifted to include a more representative example of the total population. Roueche continues by suggesting the following three assumptions regarding the development of the community college (56).

First, education is necessary for the maintenance of democracy; second, education is essential for the improvement of society and third, education helps to equalize opportunity for all people.

Studies cited regarding the enrollment of the community college all point toward larger numbers of students taking advantage of the community college for the beginning of the student's post-high school education. In addition to the larger numbers of young people reaching the college level, the studies quite definitely point to an increase in the number of students taking advantage of post-high school education if a community college is available in the vicinity.

Academic Background

The shift in admission policies brought about by the open-door policy has increased the diversity of the student body in the community college. This change has been characterized by Field:

"This policy (open admission) is based on the educational philosophy that the community college should develop a program to meet the needs of the youth and adults of the community rather than on the less flexible attitude that higher education is a product or commodity which only a restricted portion of individuals can profit from or assimilate" (23, p. 69).

This diversity has been felt not only in the academic side of the community college but in the socioeconomic area as well.

Cooley and Becker (16), reporting on project TALENT findings, concluded that students attending community colleges were more like

noncollege young people than four-year college students. This conclusion was based on the results of a two-day battery of tests administered to 440,000 high school students in 1960 and the succeeding follow-up of these students. The areas of academic ability included in this study included:

1. Vocabulary Information
2. Literature Information
3. Social Studies Information
4. Mathematic Information
5. Physical Science Information
6. Biological Information
7. Memory for Sentences
8. Distinguished Words
9. English Achievement
10. Reading Comprehension
11. Creativity
12. Abstract Reasoning
13. Mathematic Achievement
14. Arithmetic Computation

In comparing the means and standard deviations of both men and women there were significant differences between the means of noncollege, junior college, and four-year college groups.

Hoyt and Munday, (33) using information obtained from the American College Testing Program results, arrived at several conclusions regarding the community college student's ability. Table 4 indicates the comparative academic ability of a sampling of two-year and four-year colleges. Table 4 gives the means and standard deviations of the various ACT test results and high school grades. From this information it should be noted that in all cases the means of the community college student on both the ACT and the high school grades are below the means of the four-year college students.

Table 4. Academic potentials of junior college and four-year college samples (33, p. 5)

	85 Junior ^a Colleges		205 Four-year ^b Colleges		** "t"
	Mean	S.D.	Mean	S.D.	
ACT English	17.6	5.2	19.8	4.9	59.25
ACT Math	17.4	6.2	20.0	6.2	58.69
ACT Social Studies	18.2	5.9	20.7	5.7	59.52
ACT Natural Science	18.5	6.1	20.8	4.8	71.43
ACT Composite	18.0	4.9	20.5	4.8	71.43
H.S. English	2.39	.90	2.75	.86	56.25
H.S. Math	2.15	1.00	2.45	.98	42.25
H.S. Social Studies	2.49	.91	2.85	.88	56.25
H.S. Natural Science	2.25	.93	2.54	.92	43.46
H.S. Average of Four Grades	2.32	.73	2.65	.71	63.46

^aTotal number of students = 24,549.

^bTotal number of students = 101,634.

** All differences significant beyond .01 level.

This would indicate the academic potential of the community college group is lower than that of the corresponding four-year college group. Information from the same study indicates that a wider range of academic talent is found in the typical two year institution than in four year schools.

In his study of four community colleges in Iowa, Lonning (43) found the ACT scores of Arts and Science students somewhat above those reported by Hoyt and Munday in their study. Table 5 indicates the relative scores obtained by the groups studied by Lonning.

It should be noted that in all cases the ACT results for the Iowa schools are above those reported by Hoyt and Munday in their national

Table 5. Average ACT scores of college transfer students at four selected Iowa community colleges^a

	Fort Dodge			Eagle Grove			Webster City			Mason City		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
ACT English	64	20.25	3.88	15	18.67	2.96	18	20.83	5.03	112	19.43	4.45
ACT Math	64	20.58	5.63	15	19.20	6.39	18	22.61	4.67	112	20.89	5.99
ACT Soc Sc	64	21.72	4.97	15	18.73	5.81	18	24.28	5.34	112	21.30	5.87
ACT Nat Sc	64	21.69	5.02	15	20.73	3.97	18	22.89	6.19	112	22.94	5.25
ACT Comp	64	21.19	4.07	15	19.53	3.65	18	22.83	4.39	112	21.01	4.41

^aData taken from doctoral dissertation Philip Lonning.

study of community college students (33).

Using the ACT test results, Munday (48) compared students in transfer programs with those in terminal programs. The results are shown in Table 6.

It should be noted that the transfer students were consistently higher on the ACT than were terminal students. In the majority of the cases the test was significant at the .05 level.

Bossone, (8) in a 1966 study, found that almost 70 percent of the freshman who attended the public junior colleges of California in 1965 failed to pass the English qualifying examination. Another study by the California State Department of Education (10) found that three out of four students enrolled in California public junior colleges in 1964 were enrolled in classes they might have taken in high school.

While the groups are different, the wide variation of ability in community colleges was indicated by Cooley and Becker (16). Using six of the variables in the Project TALENT study, they concluded that while significant differences occur in the four-year college, junior college, and noncollege groups the percentage of junior college students scoring above the college means was approximately 33 percent and those scoring below the noncollege means was approximately 33 percent. The remaining 33 percent scored between the four-year college and noncollege means.

Data reported by Gross (18) on the SCOPE study by Educational Testing Service using the School and College Ability Test II administered to 35,000 students, indicated that young people entering four-year colleges tend to be in the top one-third of the test scores, the

Table 6. Transfer and terminal students compared on mean ACT composite scores (48, p. 326)

	<u>Transfer Students</u>			<u>Terminal Students</u>			t
	N	Mean	SD	N	Mean	SD	
Junior College No. 1							
Men	432	18.9	4.93	221	16.8	4.67	5.3*
Women	325	18.3	4.33	221	15.7	4.10	7.1*
Junior College No. 2							
	569	18.9	4.82	221	15.0	4.06	11.3*
Junior College No. 3							
	156	15.8	5.00	130	15.0	5.30	1.3*
Junior College No. 4							
Men	439	19.2	3.88	138	18.4	3.73	2.2*
Women	229	18.4	3.69	163	17.9	3.63	1.3*
Junior College No. 5							
Business Majors	190	18.3	4.27	166	16.8	4.43	3.2*
Language Arts Majors	212	19.3	4.45	112	17.1	5.12	3.8*

*Significant at the .05 level.

noncollege group in the low one-third of the scores; however, those attending community colleges tend to be spread across all three ability levels.

Medsker (46), reporting on findings of the Center for Study of Higher Education, also documented the wide range of students found in the community college. Comparing scores of students entering the community college and the four-year college, Medsker found a mean of 93.73 on the ACE examination for the students entering the two-year school as compared to a mean of 107.4 for those students entering the four-year school. While the means of the two groups are different, it should be pointed out that both groups contained individuals from the total range of score, providing for a considerable overlap in the two groups.

Richardson and Blocker (54) concluded that student bodies of most two-year schools are extremely diverse. On standardized achievement and aptitude measures, community college students tend to score somewhat lower and typically have poorer high school records than their counterparts in the four-year institutions. They continue by pointing out the necessity for providing both remedial instruction and some type of program for the honors student in the community college.

Socioeconomic Background

The role of socioeconomic status as the determinate of college attendance has been noted by several writers. D'Amico and Bakelman (19) in a 1962 study of tuition and fees in public junior college

concluded that the public junior college has provided opportunity to many people who otherwise would not have continued with education beyond high school. This is further sustained by D'Amico and Prah1 (20) in a follow-up study of Flint Community College. They found the most frequent reason for attendance at a community college was lack of financial resources. Roueche (56) reported a Florida study which concluded that low cost was a major factor for 279 of the students attending a community college. By contrast, Mellinger (47) in a 1963 study found that many factors other than financial were responsible for the junior college student selecting the junior college over the four-year college.

In a major study of Wisconsin High School Seniors in the spring of 1968, Lins (41) concluded that there is a relationship between the educational background and income of the parents and the choice of post-secondary institution selected by the son or daughter.

Cooley and Becker (16) reporting on project TALENT information, used seven variables as a basis for comparison of community college students with other groups. These variables were:

1. Mother's education
2. Father's education
3. The fathers job
4. Number of books in the home
5. Whether or not the student had room, desk and typewriter of his own at home
- 6-7. Items on the extent of luxury appliances and electronic equipment.

This analysis of data revealed that in terms of socioeconomic variables the junior college student was between the four-year college student and the noncollege student; however, the junior college student was more like the four-year college student than the noncollege student.

Cross (18) compared data from two major studies completed by Astin and Medsker.

The comparison is shown in Table 7. It should be noted that private college and universities tend to attract a large portion of their students whose father attended college and the family income is over \$10,000. While community colleges attract students from this background, the percentage is much less in both studies.

In a study of San Jose City College, Clark (13) found that 75 percent of the junior college students came from lower white and blue-collar homes. The general pattern existed for other economic levels in the same study.

Richards and Braskamp (52) conducted a study in 1965 involving variables of ACT composite, high school grades, nonacademic achievement goals, influences on choice of college educational aspiration, goals in attending activities and information regarding the students home and background. They concluded:

"...two year colleges attract pragmatic students seeking vocational training; they are less and less attractive to talented students who are intellectually and academically oriented who plan a degree in one of the traditional subject areas, and expect to take part in a wide variety of activities in college." Richards and Braskamp continue "From this pattern one might question that the student attending a two-year college is likely to be the first in his family to attend

Table 7. Relation between socioeconomic background and type of college attended (18, p. 15)

Type of college	Fathers with college ^a	Fathers with college ^b	Family income over \$10,000 ^a	Fathers professional or managerial ^{b*}
	Percent	Percent	Percent	Percent
Private university	64	61	64	49
Private four-year college	63		60	
Catholic four-year	54	32	54	43
Protestant four-year	51		51	
Public university	49	49	49	35
Private two-year	39	39	42	20
Public four-year	34	31	33	19
Public two year	34	29	40	16

^aBased on ACE data.

^bBased on Medsker-Trent data.

college and that for him college is primarily an instrument of social mobility" (52, p. 13).

The concept of the "open-door" coupled with the increasing number of students attending community colleges have increased the size and number of these institutions at a rapid rate. This growth has not been without problems. One criticism of users of the community college is the success of the student. Critics of the "open-door" policy have pointed with concern to the attrition rate in the community college.

Roueché (56) has indicated the attrition rate may be one of the most pressing problems of the community college.

Follow-up of Community College Students

Collins (15) indicates in his study that 75 percent of the community college students enter the community college with the intent of transferring and less than one-half of this number in reality finally transfer. Lagomarcino (39) using students who graduated in 1950, 51 and 52 from Iowa community colleges, found that 175 of 257, 68.1 percent, had either graduated or were enrolled in one of the Iowa universities.

In 1963, Casey (11) observed that 661 of 1080 students studied graduated from one of the three Iowa universities.

Aiken (1), in comparing freshman students who withdrew from the Woman's College of the University of North Carolina with those who continued, found a lack of significance between the two groups on the verbal and math portions of the Scholastic Aptitude Test. Results are shown in Table 8. The same investigation did find a .01 significance level using a one tailed test in the high school class ranks and predicted grade point average between the two groups. The predicted grade point average was determined by the formula $.027 \text{ SAT-V} + .017 \text{ SAT - V} - .336 \text{ RHSC} - 20.94$. This formula had been developed by the university through the use of multiple regression analysis to predict the grade point average of entering freshman on the basis of the above data and correlations between this data and the results of a 76 item

Table 8. Comparisons of the means on several predictor variable of freshman withdrawing from college at or before the end of the first semester with the means of those remaining (1, p. 30)

Variable	Withdrawals (n = 50)		Nonwithdrawals (n = 50)		T	P ^a
	Mean	S	Mean	S		
SAT - Verbal	502.19	74.55	496.35	86.97	.35	n.s.
SAT - Math in H.S.	494.79	63.59	497.52	76.16	.19	n.s.
Class	60.48	5.42	64.14	6.30	3.05	.01
Predicted GPA ^b	20.71	3.35	22.71	4.11	2.61	.01

^aProbability in one tail of the t distribution.

^bWhen Predicted Grade = .027 SAT - V = .017 SAT - M - .336
RHSC - 20.94.

biographical questionnaire, Aiken concluded that lack of motivation for academic work, rather than lack of aptitude was responsible for withdrawal from college. Heist and Williams have expressed the need for research on why students leave schools when they state:

"Potentially capable students who remain or become unproductive due to inadequate motivation or factors yet unspecified, constitute a source of waste which no contemporary society can afford. But perhaps of greater significance, to counselor and psychotherapists, as well as to educators in general, is an assumption that such personal inefficiency need not persist and can actually be modified" (31, p. 50).

Harrington (30), using regression analysis, found a combination of ACT math score, rank in high school class and biographical data blank

were the most effective variable for predicting academic performance at Ohio State University. In a study of women withdrawing from the University of Minnesota, Faunce (22) found marriage, insufficient finances, and no major or dissatisfaction with her major as the chief reasons women dropped prior to completion. Work and personal problems followed closely.

Schroeder and Sledge (59), in a Wisconsin study following high school students for a period of five years following graduation, concluded that high school academic factors correlated significantly and positively with college grade point averages in most areas and motivational factors were perhaps more important in academic success than family factors such as family size and education of parents.

Sexton (60), in a study of research completed in the area of college dropouts over the past 25 years, concluded that for the majority of students, the first year is most difficult and that most dropouts were due to low grades. Rose (55), in a research program involving both students who stay in school as well as those dropping out, concluded that students with high anxiety, intolerance to conformity, and social introversion were more likely to withdraw from school than those not displaying these characteristics.

A number of studies have followed the transfer student after he leaves the community college.

One of the most complete studies of junior college transfer students is a national study of 8500 students in 300 two-year colleges. This study by Knoell and Medsker (37) has provided a great amount of

information regarding the success of community college students who continue in four-year institutions. The study concluded that the community college transfer student was more likely to complete college if he transferred following the second year of community college rather than the first. Of students transferring following their freshman year of community college, only 35 percent graduated on time while 45 percent of those completing their sophomore year graduated on time and 75 percent completed within four years following transfer. As a result of the study, Knoell concluded:

"Junior colleges are making it possible for increasing numbers of high school graduates to begin work for baccalaureate degrees...students who would not otherwise be able to do so for reasons of academic or economic deficiency or for lack of family encouragement" (37, p. 87).

Lindsay, Marks and Homel (40) studied groups of students, both native and transfer, following the students enrollment at Pennsylvania State University in the fall of 1959. Table 9 shows the results.

The comparisons made indicate transfer groups in both Science and Nonscience areas have a higher dropout rate than do native students. In nonscience curricula, 42.6 percent of the native students remained in school while 36.7 percent of the transfer students remained. The figures for the Science curricula entailed a similar situation with 57.3 percent of the native students remaining and 39.7 percent of the transfer students remaining. Lindsay found these figures statistically significant at the .05 level indicating that real differences do exist between the two groups. Lagomarcino (39) in a 1955 study of Iowa

Table 9. Attrition analysis for native and transfer groups by curriculum at selected points (40, p. 7)

	Nonscience Curricula					Science Curricula				
	Native		Transfer		Mean* z	Native		Transfer		Mean* z
	N	pa	N	pa		N	pa	N	pa	
Enrolled	1905	100.0	672	100.0		1117	100.0	544	100.0	
End of First	1804	97.8	649	96.1	2.36	1085	97.1	511	93.5	3.50
End of Third	1442	75.7	448	66.3	4.74	868	77.7	328	60.0	7.53
End of Fourth	1348	70.8	402	59.5	5.41	820	73.4	305	55.9	7.17
End of Fifth	1152	60.5	312	42.6	6.44	734	65.7	252	46.1	7.63
End of Seventh	986	51.7	271	40.1	5.18	668	59.8	219	40.1	7.55
End of Eighth	811	42.6	248	36.7	2.68	640	57.3	216	39.5	11.20

^a Per cent remaining at each point.

*A mean z-value of 1.96 is required at the .05 level of significance. All comparisons are significant.

community colleges found that the junior college student did about as well in community college as he did in high school and the community college transfer received lower grades in the senior college than in community colleges. The grade point average was .49 lower than the community college average.

Cross (18) reviewed a number of studies of the junior college student. These have been summarized by Cohen and Brawer as follows:

1. Carefully designed research studies find that junior college students in national, regional, or statewide samples achieve lower mean scores on academic ability tests than comparable selected students at four-year colleges and universities. Some junior college students, however, score high on measures of academic aptitude. Little is actually known about patterns of special abilities among junior college students; further exploration of their strengths is needed.
2. The junior college is presumed to play a significant role in the democratization of American higher education, with parents of these students tending to have lower socioeconomic status than parents of students in four-year colleges and universities. But much more information is needed about junior college students' home environments, parental encouragement, financial standing, and related matters. Similarly, more information is needed about how much parents know about college costs and college financial programs.
3. Clear-cut differences in occupational aspirations exist between noncollege, junior college, and four-year college groups, with junior college students generally appearing less settled about future plans than either of the other two groups. However, little is known about those junior college students who do not later transfer to four-year colleges - the vocationally-oriented students, the drop-outs, or older students returning to pick up new skills simply to revitalize their education.
4. Junior college students have more practical orientations to life and to college than their four-year college peers. They are less intellectually disposed, score lower on measures of autonomy and nonauthoritarianism, appear more

cautious and controlled, are less likely to be adventurous and flexible and are less sure of themselves. Yet the research on personality characteristics of junior college students is meager and more information is needed regarding their values, feelings about self and inter-personal relationships (14, p. 11).

Summary and Conclusions

The literature reviewed regarding the community college student has been gathered through a variety of sources; however, a pattern is shown in the review. Biographical data on students has been gathered through the use of questionnaires to the students involved. The major study in the transfer area was completed by Knoell and Medsker (37) making use of a 99 item questionnaire to obtain information regarding personal and family characteristics, decision-making about college and career, evaluation of junior college experience and transfer problems. This questionnaire was completed by 84 percent of the students involved in the study. The other major study of students reviewed was by Trent and Medsker (65) which again made use of the questionnaire approach to obtain biographical data regarding the students. Data regarding ability level and achievement in both studies were obtained through the use of testing and use of transcripts of records.

The review of literature points out three major items that are of great importance to the community college and the programs offered by these colleges.

1. It appears that numbers of students beginning their college career in the community college will increase in the next few years.

2. On standard measures of ability and achievement, community college students fall in a wider range than the typical four-year student with averages for the community college students being lower than those of the four-year college student.
3. Student attrition in the community college is one of the major problems facing the community college. Lack of knowledge on reasons for this attrition leads to a major problem with the community college in determination of adequate programs for the student.

The use of the questionnaire for the gathering of biographical data and past performance records for achievement appear to be the most common methods of securing information regarding former students. This method provides the opportunity to obtain a wide coverage at a minimum of expense.

CHAPTER III: METHOD OF PROCEDURE

Introduction

The problem of the study was to determine the outcome of students who enrolled in the Arts and Science programs in the Iowa community colleges in 1966.

This chapter describes the methods and procedures that were used to collect and analyze the required data for the study. The chapter has been divided into three parts: 1) selection of the sample, 2) description of the data collection methods, and 3) treatment of the data.

Sample Selection

The sample for the study was based on a 30 percent random sample of the entering Arts and Science freshmen, full-time students in the 16 community colleges operating in the state in the fall of 1966. The breakdown of the grouping is shown in Table 10.

The students were followed from the time they entered the particular school until the spring of 1971.

The 30 percent sample size was selected to provide the smallest school in the study with a sample size of 25. Garrett and Woodworth (26) in relating the inverse relationship between sample size and standard error suggest that below the n of 25 there is some doubt as to whether the sample is representative of the population. The sample for each

Table 10. First-time, full-time, Arts and Science enrollments in Iowa public community colleges. Fall 1966 and sample size

College	Total	30 Percent Sample
Boone Junior College	222	67
Burlington Community College	531	160
Centerville Community College	373	112
Clarinda Community College	310	93
Clinton Community College	361	108
Eagle Grove Community College	130	39
Ellsworth Community College	580	174
Emmettsburg Community College	85	26
Estherville Community College	423	127
Fort Dodge Community College	562	169
Keokuk Community College	180	54
Marshalltown Community College	466	140
North Iowa Area Community College	816	245
Southwestern Community College (Creston)	225	68
Webster City Community College	165	50
Muscatine Community College	310	93
Total	5,739	1,725

school was developed through the use of a random sort computer program for each of the 16 schools involved.

Data Collection

Three types of data gathering instruments were designed to provide information regarding the student. Samples of these forms are found in APPENDIX.

Prior to the collection of data a meeting was held with the superintendents of the area schools to explain the proposed program and obtain suggestions regarding data collection.

While some attrition was expected, every effort was made to obtain information on all students in the selected sample. After permission to proceed was obtained, student personnel staff members were requested to provide the following information on the records selected through random sampling.

1. Student's name
2. Last available address
3. Parents name
4. Transfer institution if available
5. High school class rank - number
6. High school class size - number
7. ACT English standard score
8. ACT Math standard score
9. ACT Social Studies standard score
10. ACT Natural Science standard score
11. ACT Composite standard score
12. Number of semesters completed
13. Semester credit hours earned
14. Grade point average
15. Status on leaving the institution
 1. Good standing
 2. Probation
 3. Dismissal
16. Received a degree
 1. Yes
 2. No.

If the student had indicated transfer to another school the transfer institution was requested to supply the following information:

1. Total semester hours earned at that institution
2. Number of semesters attended
3. Cumulative grade point at that institution
4. Present status of the student
 1. Graduate
 2. Dropped
 3. Dismissed
 4. Still enrolled
 5. Transfer - to where.

Information concerning the student was solicited through the use of a questionnaire. Information requested included:

1. Factors influencing attendance
2. Family income
3. Educational level of father and mother
4. Commuting distance to college
5. Distance to home
6. Type of housing while attending college
7. Marital status while attending college
8. Extra curricular activity participation
9. Amount of college expenses earned
10. Hours worked while in college
11. Reason for leaving
12. Difficulty of course work
13. Quality of teaching
14. Current status
15. Future educational plans
16. Reasons for not completing college
17. Overall value of community college
18. Present occupation
19. Present salary range.

Instruments to be Utilized

The instruments used to gather information were constructed to obtain the information needed for the study. Three types of documents were used.

The Initial Student Information Form was designed to provide the project with information regarding the students selected for the study. This blank was sent to community colleges involved for completion.

The student questionnaire was mailed to all students selected for completion. This blank provided data regarding the socioeconomic background of the students entering the Iowa community colleges in

1966 and provided information about the student since he enrolled at the community college.

The transfer college form was used to obtain information from colleges regarding semester hours earned, number of semesters attended, grade point average at the transfer institution and the present status of the student.

Analysis of data

In describing the kind of student who enrolled in the community college in 1966, a number of questions and hypothesis are presented in this section. If statistical treatment is involved the null hypothesis is included.

Descriptions

Question one: What kind of students enrolled in the Arts and Science programs of the 16 Iowa community colleges in the fall of 1966 in terms of the following:

- a. High school class rank
- b. High school size
- c. ACT English
- d. ACT Math
- e. ACT Social Studies
- f. ACT Natural Science
- g. ACT Composite
- h. Age
- i. Sex
- j. Educational level of mother
- k. Educational level of father
- l. Commuting distance to college
- m. Marital status while at school
- n. Employment prior to starting college
- o. Why chose to attend college
- p. Distance from home to community college.

Question two: What were the characteristics of the student during his enrollment at one of the 16 Iowa community colleges in 1966?

- a. Semester hours credit during first semester
- b. Total semester hours completed at community college
- c. Cumulative grade point at community college
- d. Number of semesters of attendance
- e. Transfer or terminal
- f. Type of housing
- g. Extra-curricular activities
- h. Amount of college expenses earned
- i. Hours worked while in college
- j. Graduation
- k. Terminating status.

Question three: What are the characteristics of the transfer student after leaving one of the 16 Iowa community colleges?

- a. Number transferring
- b. Institute - state, private
- c. Hours completed
- d. Graduated
- e. Semesters attended
- f. Grade point average at transfer college.

Question four: What is the present status of the individuals who enrolled in one of the 16 Iowa community colleges in 1966?

- a. Future educational plans
- b. Present occupation
- c. Present salary range
- d. Longevity on present job

Question five: What is the reaction of the individuals who enrolled in the 16 community colleges in 1966 toward their community college experience?

- a. Difficulty of course work
- b. Quality of teaching
- c. Reasons for leaving college
- d. Overall value of the community college.

Analysis of descriptions

Descriptions are presented in tabular form for the 16 community colleges used in the study. Either percentages or means and standard deviations are used to provide an overall picture of the student characteristics and evaluation of the sample.

Comparisons

Comparison one: How similar are the student populations of the 16 public community colleges in Iowa based on entering first-time full-time students in 1966?

Null hypothesis: There is no significant difference between the student bodies of the 16 community colleges in terms of the following variables:

1. High school rank
2. High school size
3. ACT English
4. ACT Math
5. ACT Social Studies
6. ACT Natural Sciences
7. ACT Composite
8. Age
9. Sex
10. Educational level of mother
11. Educational level of father
12. Commuting distance to college
13. Distance from home
14. Marital status while in school
15. Factors influencing attendance
16. Employment prior to community college attendance.

Comparison two: How similar are the student bodies of the 16 community colleges following enrollment?

Null hypothesis: There is no significant differences between the student bodies of the 16 community colleges on the following variables:

1. Semester hours credit first enrollment
2. Total semester hours completed
3. Cumulative grade point
4. Number of semesters of attendance
5. Transfer or terminal
6. Type of housing.

7. Extra-curricular activities
8. Amount of college expenses earned
9. Hours worked while in college
10. Community college degree
11. Status on leaving.

Comparison three: How similar are the student bodies of the 16 community colleges after terminating at the community colleges?

Null hypothesis: There are no significant differences in the 16 community colleges student bodies regarding what students do after leaving the community college in the following areas:

1. Percentage of transfer students
2. Type of institution
3. Semester hours completed
4. Grade point average
5. Number of graduates
6. Semesters attended.

Comparison four: How similar are the student bodies of the 16 community colleges four years after the first enrollment?

Null hypothesis: There are no significant differences in the student bodies of the 16 community colleges regarding the following points:

1. Future educational plans
2. Present occupation
3. Present salary range
4. Longevity on present job.

Comparison five: How similar are the reactions of the student bodies regarding their experience in the 16 public community colleges of Iowa?

Null hypothesis: There are no significant differences in the student bodies of the 16 community colleges regarding the following points:

1. Reason for leaving
2. Difficulty of course work
3. Quality of teaching
4. Overall value of the community college.

Analysis of Comparisons

Chi-square was calculated for the following variables across the 16 Iowa community colleges involved in the study.

1. Sex
2. Educational level of father
3. Educational level of mother
4. Commuting distance to college
5. Distance from home
6. Marital status
7. Age
8. Transfer or terminal
9. Type of housing
10. Extra-curricular activities
11. College expenses earned
12. Hours worked per week
13. Percentage of transfer
14. Number of four year graduates
15. Type of institution
16. Present occupation
17. Future educational plans
18. Longevity on present job
19. Present salary range
20. Reason for leaving
21. Difficulty of courses
22. Quality of teaching
23. Reason for not completing
24. Overall evaluation.

The following formula can be used to compute chi-square:

$$\chi^2 = \frac{(f - F)^2}{F}$$

where

f = observed frequency in any cell,

F = expected frequency if the null hypothesis of independence holds, computed through the use of the following:

$$F = \frac{(\text{row total})(\text{column total})}{n}$$

n = total observations.

A single classification of variance was calculated for the following variables:

1. High school class rank
2. High school class size
3. Five American College Test scores
4. Semester hours completed at community college
5. Semester hours of credit earned at community college
6. Semester hours carried first semester
7. Cumulative grade point average at community college
8. Semester hours completed at transfer institutions
9. Cumulative grade point average at transfer institution
10. Semesters attended at four year school.

The following formula (61) can be used to solve one-way analysis of variance:

Source	Degrees Freedom	Sum of Squares	Mean Square
Between	$a - 1$	$\sum \frac{X_{ij}^2}{n_i} - C$	S_c^2
Within	$N - 2$	$\sum \sum X_{ij}^2 - \frac{\sum X_{ij}^2}{n_i} - \frac{\sum \sum X_{ij}^2 - C}{\sum \sum X_{ij}^2 - C}$	S^2

where

X_{ij} = the score for the j^{th} person in the i^{th} class,

n_i = number of observations in i^{th} class,

a = number of classes,

N = grand total

C = correction factor = $\frac{X_{..}^2}{N}$,

S_c^2 = $\frac{\text{sum of squares (between)}}{\text{degrees of freedom (between)}}$

S^2 = $\frac{\text{sum of squares (within)}}{\text{sum of squares (within)}}$

The F ratio = $\frac{S_c^2}{S^2}$ with $(a-1)$ and $(N-1)$ degrees of freedom.

Predictions

Problem: Are there specific student characteristics which can be used to predict success in the community college, i.e., satisfactory completion of a two-year program (graduate).

Null hypothesis: There is no relationship between each of the following characteristics and successful completion of the community college program:

1. High school class rank
2. High school class size
3. ACT English
4. ACT Math
5. ACT Social Studies
6. ACT Natural Sciences
7. ACT Composite
8. Family income
9. Educational level of mother
10. Educational level of father
11. Marital status
12. Age
13. Sex
14. Years prior employment
15. Extra-curricular activities
16. Hours worked while in college.

Analysis of predictions

The discriminate analysis statistic was selected for its ability to predict a dichotomy from several numerical variables (70). Predicting a dichotomy from a number of variables allows the researcher to classify students into specific groups. The discriminate analysis statistic was used to test the prediction hypothesis and to create a prediction equation.

The following statistic was used (63):

X_{ijk} = i^{th} score on the j^{th} variable in the k^{th} group.

Means:

$$\bar{x}_{jk} = \frac{\sum_{i=1}^{n_k} x_{ijk}}{n_k}$$

where

$k = 1, 2, 3, \dots, g$ are groups,

n_k = sample size in the k^{th} group,

$j = 1, 2, 3, \dots, m$ are variables.

Within-group sums of squares and cross-products of deviations from means:

$$S_k = s_{jl}^k = \sum (x_{ijk} - \bar{x}_{jk})(x_{ilk} - \bar{x}_{lk})$$

$j = 1, 2, 3, \dots, m.$

$l = 1, 2, 3, \dots, m.$

The pooled dispersion matrix was calculated as follows:

$$D = \frac{\sum_{k=1}^g S_k}{\sum_{k=1}^g N_k - g}$$

where

g = number of groups.

This sub routine performs a discriminate analysis by calculating a set of linear functions that serve as indices for classifying an individual into one of k groups. For all groups combined, the following are obtained:

Common means:

$$\bar{x}_i = \frac{\sum_{k=1}^g n_k \bar{x}_{jk}}{\sum_{k=1}^g n_k}$$

where

g = number of groups,

j = 1, 2,m variables,

n_k = sample size in the k^{th} variable in the k^{th} group

\bar{x}_{jk} = mean of j^{th} variable in k^{th} group.

Generalized Mahalanobis D^2 statistic, V_i

$$V = \sum_{i=1}^m \sum_{j=1}^m d_{ij} \sum_{k=1}^g n_k (\bar{x}_{ij} - \bar{X}_i)(\bar{x}_{jk} - \bar{X}_j)$$

where

d_{ij} = the inverse element of the pooled dispersion matrix D .

V was used as chi-square (under assumption of normality) with $m(g-1)$

degrees of freedom to test the hypothesis that the mean values are

the same in the g groups for these m variables. For each discriminate

function $k^* = 1, 2, \dots, g$, the following statistics were calculated.

Coefficients:

$$C_{ik^*} = \sum_{i=1}^m d_{ij} \bar{x}_{jk}$$

where

$$\begin{aligned} i &= 1, 2, \dots, m \\ k &= k^* \end{aligned}$$

constant:

$$C_{ok^*} = -1/2 \sum_{j=1}^m \sum_{l=1}^m d_{jl} \bar{x}_{jk} \bar{x}_{lk}$$

For each i^{th} case in each k^{th} group, the calculations were performed which represents the discriminant function:

$$f_{k^*} = \sum_{j=1}^m C_{jk} x_{ijk} + C_{ok^*}$$

where

$$k^* = 1, 2, \dots, g.$$

It is possible to test for significant loss when variables are dropped by using the following calculation:

$$df = D_{\text{diff}} - t(g-1)$$

when

t = number of variables lose, i.e.,

$$D_{\text{larger}} - D_{\text{smaller}} = D_{\text{diff}}$$

g = number of groups.

CHAPTER IV: FINDINGS

The findings of this study are reported in seven general sections. Section A describes students who entered one of 16 Iowa community colleges as full-time students in Arts and Science programs in 1966. The information used was provided from student records of the sample and selected responses on the Former Student Information Form (see APPENDIX). Section B describes the students during their period of enrollment at one of the 16 Iowa community colleges. Section C, D and E focus on the student after he terminated attendance at one of the 16 Iowa community colleges. Section F delineates through the use of Analysis of Variance and Chi-Square techniques the differences that exist between the student bodies of the 16 Iowa community colleges involved in the study in terms of selected variables and Section G delineates the specific characteristics that were found to predict success in the community colleges through the use of Discriminate Analysis techniques.

Section A

Descriptions of students entering 16 Iowa community colleges full-time Arts and Science students in 1966

The data provided in Section A involves information relative to the backgrounds of entering students such as high school class size,

academic achievement indicators, age, sex, educational background of parents, commuting distance to college, marital status, employment and why the individual chose to attend a specific school. Descriptions in this section represent all students in the sample on which the particular item of information presented was available by individual school.

The standard score means for the various tests of the American College Test Battery are shown in Table 11. The mean value for the English portion of the American College Tests for the 16 Iowa community colleges was 18.87 (n=1558) with a range of means from a low 17.33 (n=61) at Boone Community College to a high of 20.13 (n=137) at Marshalltown Community College. The variance as measured by the Standard Deviation ranged from a low of 3.40 (n=22) at Emmetsburg Community College to a high of 5.28 (n=47) at Webster City Community College. The mathematics portion of the American College Tests ranged from a low of 18.18 standard score points (n=22) at Emmetsburg Community College to a high of 21.45 standard score points (n=137) at Marshalltown Community College with an average for the 16 Iowa community colleges of 19.94 (n=1558). The standard deviation ranged from a low of 5.31 (n=37) at Eagle Grove Community College to a high of 6.75 (n=52) at Southwestern Community College at Creston. The social studies portion of the American College Tests ranged from a low of 19.24 points (n=89) at Muscatine Community College to a high of 21.73 points (n=137) at Marshalltown Community College with a mean value of 20.39 (n=1558) for the 16 Iowa community colleges studied.

Table 11. Mean values of American College Tests of first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966 (n = 1558)

Community College	N	<u>English</u>		<u>Math</u>		<u>Social Studies</u>		<u>Nat. Science</u>		<u>Composite</u>	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Boone	61	17.33	5.10	21.10	6.27	19.92	6.77	20.10	5.61	19.75	4.88
Burlington	150	19.19	4.96	19.77	5.91	20.41	5.70	21.01	5.84	20.21	4.71
Centerville	87	18.17	4.21	19.41	6.09	19.07	5.47	20.10	5.34	19.33	4.25
Clarinda	65	18.06	4.95	19.03	5.94	19.68	5.47	19.49	5.52	19.17	4.38
Clinton	94	18.24	4.16	19.53	5.55	20.09	6.34	20.20	5.80	19.65	4.45
Eagle Grove	37	18.70	4.43	18.32	5.31	19.70	5.05	20.30	5.26	19.41	4.12
Ellsworth (Iowa Falls)	162	18.85	4.43	19.31	5.34	19.77	5.27	19.71	5.67	19.49	4.18
Emmettsburg	22	19.14	3.40	18.18	5.50	21.09	3.61	20.18	4.37	19.86	3.09
Estherville	110	18.86	4.37	19.46	5.54	20.45	5.41	20.50	5.87	19.99	4.44
Fort Dodge	155	19.39	4.57	19.70	5.84	20.95	5.15	20.86	4.56	20.25	3.88

Keokuk	54	18.07	5.11	20.06	6.35	20.06	5.76	20.67	5.41	19.76	4.69
Marshalltown	137	20.13	4.30	21.45	6.30	21.73	5.70	22.23	5.06	21.50	4.45
Muscatine	89	18.47	4.17	19.51	6.32	19.24	5.67	19.98	5.29	19.56	4.45
North Iowa (Mason City)	236	18.91	4.41	20.64	5.81	21.00	5.64	21.64	5.07	20.67	4.22
Southwestern (Creston)	52	19.29	4.35	20.69	6.75	20.96	4.79	21.15	5.31	20.54	4.57
Webster City	47	19.40	5.28	20.53	6.34	21.49	6.57	21.81	6.09	21.02	5.45
Total		<u>18.87</u>		<u>19.94</u>		<u>20.39</u>		<u>20.73</u>		<u>20.09</u>	

The mean standard score value for the 16 Iowa community colleges studied in the natural science portion of the American College Test was 20.73 (n=1558) with values ranging from a low of 19.49 (n=65) at Clarinda Community College to a high of 22.23 (n=137) at Marshalltown Community College. Standard deviations ranged from a low of 4.37 (n=22) at Emmetsburg Community College to a high of 6.09 points (n=47) at Webster City Community College. The composite values for the four tests ranged from a low of 19.17 (n=65) at Clarinda Community College to a high value of 21.50 (n=137) at Marshalltown Community College with a mean value of 20.09 (n=1558) for the 16 Iowa community colleges. It should be noted that with two exceptions, Eagle Grove Community College and Emmetsburg Community College, the mean standard scores reported in the English portion of the American College Tests were the lowest of the four tests in the series and with one exception, Fort Dodge Community College, the English test had the lowest variance as measured by the standard deviation.

The range of scores between schools on the four tests varied from a low 2.66 standard score points on the social studies test to a high of 3.27 standard score points on the mathematics test with the composite showing a narrower range of only 2.33 standard score points.

Table 12 provides data on the size of high school class from which students enrolling in 15 Iowa community colleges Arts and Science programs in 1966 graduated and the relative class rank of the enrolled students. Mean class size from which students graduated ranged from a low of 113.7 students (n=60) at Southwestern Community College located

Table 12. Size of high school class and relative rank in class of first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966

Community college	N	Size of high school class		Range		Relative rank in class
		Mean	SD	Low	High	0 = High 100 = Low
Boone	64	159.97	127.32	12	723	55.77
Burlington	124	266.43	176.98	19	809	48.90
Centerville	94	125.28	107.79	26	515	60.08
Clarinda	72	140.46	163.41	21	835	67.27
Clinton	192	214.20	186.16	8	458	51.23
Eagle Grove	38	109.76	53.25	18	252	50.37
Ellsworth (Iowa Falls)	162	198.69	241.20	17	1255	64.74
Emmettsburg		No Data Available				
Estherville	120	110.77	102.71	18	563	60.54
Fort Dodge	163	211.94	172.02	7	723	50.95
Keokuk	49	137.60	92.85	26	462	47.85
Marshalltown	138	234.70	188.31	13	787	44.27
Muscatine	79	170.73	160.18	24	614	56.06
North Iowa (Mason City)	225	210.00	186.00	18	723	54.20
Southwestern (Creston)	60	113.70	104.38	15	622	49.82
Webster City	49	206.27	128.74	42	612	49.65
Total	1629					
Mean all students		175.40				53.72

at Creston to a high of 266.43 students (n=124) at Burlington Community College with a mean value for the 15 Iowa community colleges from which data was available of 175.40 students (n=1629). The variance as measured by the Standard Deviation ranged from a low of 53.25 students (n=38) to a high of 241.20 (n=162). The wide range of variance in high school class size of enrolled students is also indicated by the range of class size also shown in Table 12. The size of high school graduating class of enrolled students ranged from a low of seven students at Fort Dodge Community College to a high of 1255 students in a high school in a graduating class at Ellsworth Community College in Iowa Falls.

The relative rank in class of students enrolled at 15 Iowa community colleges is shown in Table 12. This ratio was determined by dividing the mean standing in high school classes by the mean size of high school classes reported for each of the community colleges involved in the study. It should be noted that no data relative to high school class rank or size was available from Emmetsburg Community College. The relative rank in class number is based on "0" being high and "100" being low with "50" the middle of the graduating class. The 15 Iowa community colleges reporting class rank and size indicate a relative class rank for the first-time, full-time Arts and Science students enrolled in 1966 of 53.72 (n=1629) or a mean slightly below the middle of their high school class. Marshalltown Community College had the highest relative class rank of 44.27 (n=138) and Clarinda Community

College had the lowest class rank of 67.27 (n=94) indicating a mean class rank below the total class average.

All of the 16 Iowa community colleges involved in the study enrolled greater numbers of men than women as first-time, full-time Arts and Science students in 1966. Table 13 provides data regarding the numbers of men and women enrolled in each school. Sixty percent of the entering 1966 class at Burlington Community College (n=160) were men with 40 percent being female. The widest variation between men and women existed at Southwestern Community College at Creston where 79.41 percent of the first-time, full-time, Arts and Science students (n=68) were men in 1966 and only 20.59 percent of the students were women. The overall mean for the 16 Iowa community colleges (n=1726) was 68.88 percent for men students and 31.12 percent for women students.

The mean age of first-time, full-time, Arts and Science students entering the 16 Iowa community colleges in 1966 as reported by the students on Former Student Information Form (see APPENDIX) was 18.42 years (n=994). Table 14 provides information on the mean age at the 16 colleges involved in the study. The highest mean age for the sample was at Eagle Grove Community College (n=27) where the mean age was slightly over 19 years (19.04). The low mean age reported was 17.71 years (n=7) at Emmetsburg Community College. It should also be noted that the greatest and least standard deviation also occurred at these two community colleges (4.16 and .49 respectively). The small n

Table 13. Sex of first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966

Community college	N	Male		Female	
		N	%	N	%
Boone	67	44	65.67	23	34.33
Burlington	160	96	60.00	64	40.00
Centerville	112	86	76.79	26	23.21
Clarinda	93	73	78.49	20	21.51
Clinton	108	82	75.93	26	24.07
Eagle Grove	39	27	69.23	12	30.77
Ellsworth (Iowa Falls)	174	116	66.67	58	33.33
Emmettsburg	26	17	65.38	9	34.62
Estherville	127	82	64.57	45	35.43
Fort Dodge	169	107	63.31	62	36.69
Keokuk	54	37	68.52	17	31.48
Marshalltown	140	88	62.86	52	37.14
Muscatine	93	65	69.90	28	30.11
North Iowa (Mason City)	245	178	72.76	67	27.24
Southwestern (Creston)	68	54	79.41	14	20.59
Webster City	50	36	72.00	14	28.00
Total	1725	1188	68.88	537	31.12

Table 14. Age of first-time, full-time, Arts and Science students in 16 Iowa community colleges in 1966 at time of first enrollment

Community College	N	17-18-19 Years		Age		Age Range	
		%	Mean	Std. Deviation	Low	High	
Boone	35	77.14	18.94	2.10	17	29	
Burlington	92	83.69	18.67	2.25	17	32	
Centerville	56	89.83	18.23	1.21	17	24	
Clarinda	51	84.62	18.51	2.20	15	31	
Clinton	58	83.61	18.38	1.66	17	27	
Eagle Grove	27	88.89	19.04	4.16	17	39	
Ellsworth (Iowa Falls)	93	92.62	18.16	1.13	17	25	
Emmettsburg	7	100.00	17.71	.49	17	18	
Estherville	82	91.57	18.23	1.23	17	26	
Fort Dodge	100	95.05	18.24	1.69	17	30	
Keokuk	35	88.57	18.71	3.24	17	36	
Marshalltown	95	86.60	18.62	2.25	17	34	
Muscatine	55	84.21	18.49	1.67	16	26	
North Iowa (Mason City)	133	93.78	18.30	1.09	17	24	
Southwestern (Creston)	46	87.24	18.76	2.68	17	30	
Webster City	29	90.33	17.93	.59	17	26	
Total	994		18.42				

available at these two schools account for part of this variance. In each of the 16 Iowa community colleges studied, the 17-18-19 year age group accounted for over three-fourths of the entering first-time, full-time, Arts and Science students in 1966 with this age group accounting for the entire sample (100 percent) at Eagle Grove Community College (n=27) at the upper percent and 77.14 percent of the sample at Boone Community College (n=35). The consistency of the age in the 16 community colleges is also indicated by the age range shown in Table 14. With the exception of one individual at Clarinda Community College and one individual at Muscatine Community College, the low age for students at the community colleges was 17 years at time of entrance. The high age at time of entrance was one person age 39 at Eagle Grove Community College.

Table 15 indicates the range of educational level of the fathers of students reporting on the Former Student Information Form (n=1012). The return on the Former Student Questionnaire of 1012 represents 58.6 percent return of questionnaires forwarded to students. Those students who reported their fathers had completed elementary school or less at the time the student entered community college accounted for 13.63 percent of the total returned (n=1012). The range was from no students reporting fathers in this category at Emmetsburg Community College (n=7) to a high of 24.56 percent reporting fathers having completed elementary school or less at Muscatine Community College (n=57). The low return from Emmetsburg Community College should be noted and taken into consideration. If Emmetsburg Community College were excluded the 6.45

Table 15. Educational level of father as reported by first-time, full-time Arts and Science students in 16 Iowa community colleges in 1966

Community college	Elementary			High school (nongrad.)	
	N	N	%	N	%
Boone	35	3	8.57	6	17.14
Burlington	92	8	8.70	12	13.04
Centerville	59	7	11.86	6	10.17
Clarinda	52	7	13.46	13	25.00
Clinton	61	13	21.31	12	19.67
Eagle Grove	27	4	14.81	6	22.22
Ellsworth (Iowa Falls)	95	13	13.68	22	23.16
Emmettsburg	7	-	-	-	-
Estherville	83	9	10.84	17	20.48
Fort Dodge	101	12	11.88	15	14.85
Keokuk	35	5	14.29	7	20.00
Marshalltown	97	11	11.34	19	19.59
Muscatine	57	14	24.56	10	17.54
North Iowa (Mason City)	133	25	18.80	21	15.79
Southwestern (Creston)	47	5	10.64	8	17.02
Webster City	31	2	6.45	5	16.13
Total	1012	138	13.63	179	17.69

<u>High school (grad.)</u>		<u>College</u>		<u>College (grad.)</u>		<u>Prof. school</u>		<u>No response</u>	
N	%	N	%	N	%	N	%	N	%
14	40.00	7	20.00	4	11.43	1	2.86	-	-
42	45.65	16	17.39	8	8.70	5	5.43	1	1.09
34	57.63	6	10.17	2	3.39	3	5.08	1	1.69
21	40.00	7	13.46	2	3.85	2	3.85	-	-
26	42.62	5	8.20	-	-	4	6.56	1	1.64
13	48.15	3	11.11	1	3.70	-	-	-	-
39	41.05	13	13.68	4	4.21	4	4.21	-	-
4	57.14	2	28.57	1	14.29	-	-	-	-
46	55.42	5	6.02	5	6.02	-	-	1	1.20
49	48.51	12	11.88	8	7.92	3	2.97	2	1.98
18	51.43	1	2.86	2	5.71	1	2.86	1	2.86
48	49.48	9	9.28	4	4.12	4	4.12	1	2.06
22	38.60	6	10.53	3	5.26	1	1.75	1	1.75
54	40.60	16	12.03	13	9.77	-	-	4	3.01
27	57.45	3	6.38	-	-	3	6.38	1	2.13
16	51.61	4	12.90	2	6.45	2	6.45	-	-
473	46.74	115	11.36	59	5.83	33	3.26	15	1.49

percent reporting father having completed elementary school or less at Webster City Community College (n=31) would be low. The students reporting fathers' educational level as attending some high school, but not graduating ranged from a low of zero, again at Emmettsburg Community College (n=7) to a high of 25 percent at Clarinda Community College (n=52) with an average for the 16 Iowa community colleges of 17.69 percent indicating fathers had completed some high school, but had not graduated. Students reporting fathers completing high school accounted for a low of 38.6 percent of the returns at Muscatine Community College (n=57) to a high of 57.63 percent of those returning questionnaires at Centerville Community College (n=59). It should be noted that fathers educational level was below that of the students reporting in over three of four of the questionnaires returned. Students who reported fathers attending college but not completing ranged from 2.86 percent at Keokuk Community College (n=35) to 28.57 percent at Emmettsburg Community College (n=7) with a mean value for all returned questionnaires of 11.36 percent (n=1012). Students reporting fathers completing college ranged from 3.39 percent at Centerville Community College (n=59) to 14.29 percent at Emmettsburg Community College (n=7) with a mean value for the 16 community colleges of 5.83 percent (n=1012). Several of the community colleges had no students reporting parents attending professional schools. Clinton Community College (n=61) students returning questionnaires indicated 6.56 percent of the fathers had attended professional schools. The mean value for the 16 Iowa community colleges

was 3.26 percent reporting fathers attending professional schools (n=1012).

Mothers' educational level as reported by students completing the Former Student Information Form is shown in Table 16. Students reporting mothers completing elementary school or less ranged from 2.86 percent at Boone Community College (n=35) to a high of 22.22 percent at Eagle Grove Community College (n=27) with a mean value for all students completing questionnaires of 11.75 percent (n=1012). The largest group, constituting 52.37 percent (n=1012) of those completing questionnaires, indicated their mothers had completed high school as the highest level of education with students who enrolled at Muscatine Community College reporting a low of 35.09 percent (n=57) of their mothers completing high school and students who enrolled at Centerville Community college reporting a high of 64.41 percent (n=59) of their mothers completing high school. Mothers attending college but not completing a degree were reported by 14.62 percent of those returning questionnaires. This percent ranged from a low of 8.25 percent reporting their mothers attended college but did not complete, at Marshalltown Community College (n=97) to a high of 32.26 percent at Webster City Community College (n=31). College graduation of their mother was reported by 7.60 percent (n=1012) of the students returning questionnaires with Boone Community College reporting only 2.86 percent (n=35) completing and Emmetsburg Community College (n=7) reporting 14.29 percent completing. Professional school attendance by mothers was reported by 6.81 percent of the students completing questionnaires. Boone Community College students reported 22.86 percent (n=35)

Table 16. Educational level of mother as reported by first-time, full-time, Arts and Science students in 16 Iowa community colleges in 1966

Community college	Elementary			High school (nongrad.)	
	N	N	%	N	%
Boone	35	1	2.86	1	2.86
Burlington	92	5	5.43	11	11.96
Centerville	59	5	8.47	7	11.86
Clarinda	52	4	7.69	5	9.62
Clinton	61	4	6.56	10	16.39
Eagle Grove	27	1	3.70	6	22.22
Ellsworth (Iowa Falls)	95	3	3.16	9	9.47
Emmettsburg	7	1	14.29	1	14.29
Estherville	83	6	7.23	11	13.25
Fort Dodge	101	7	6.93	6	5.94
Keokuk	35	3	8.57	7	20.00
Marshalltown	97	5	5.15	10	10.31
Muscatine	57	8	14.04	12	21.05
North Iowa (Mason City)	133	9	6.77	14	10.53
Southwestern (Creston)	47	1	2.13	3	6.38
Webster City	31	1	3.23	6	19.35
Total	1012	64	6.32	119	11.75

<u>High school (grad.)</u>		<u>College</u>		<u>College (grad.)</u>		<u>Prof. school</u>		<u>No response</u>	
N	%	N	%	N	%	N	%	N	%
19	54.29	5	14.29	1	2.86	8	22.86	-	-
48	52.17	13	14.13	10	10.87	5	5.43	-	-
38	64.41	5	8.47	3	5.08	-	-	1	1.69
26	50.00	9	17.31	4	7.69	4	7.69	-	-
29	47.54	8	13.11	4	6.56	5	8.20	1	1.64
16	59.26	3	11.11	1	3.70	-	-	-	-
57	60.00	11	11.58	7	7.37	8	8.42	-	-
3	42.86	1	14.29	1	14.29	-	-	-	-
36	43.37	16	19.28	7	8.43	6	7.23	1	1.20
54	53.47	13	12.87	8	7.92	13	12.87	-	-
20	57.14	3	8.57	2	5.71	-	-	-	-
61	62.89	8	8.25	7	7.22	5	5.15	1	1.03
20	35.09	8	14.04	4	7.02	5	8.77	-	-
64	48.12	27	20.30	15	11.28	4	3.01	-	-
26	55.32	8	17.02	2	4.26	6	12.77	1	2.13
13	41.94	10	32.26	1	3.23	-	-	-	-
530	52.37	148	14.62	77	7.60	69	6.81	5	

of their mothers attended professional schools and several schools had no one reporting in this category. It should be noted again as with the father's educational level, the majority of those completing questionnaires, 70.44 percent indicated their mother had not completed any post-high school education. It should also be noted the variation which exists between educational level of the students fathers and mothers. Over 17 percent of the reported educational level of fathers were in the categories of some college or college graduate while the same groups accounted for over 21 percent of the mothers. The same situation occurs at the elementary level where roughly twice as many, 6.32 percent compared to 13.63 percent, fathers as mothers discontinued schooling with an elementary education.

Information regarding the total distance traveled going to and from school each day is shown in Table 17. Of the students attending one of the 16 Iowa community colleges as first-time, full-time, Arts and Science students in 1966, 40.01 percent indicate they traveled less than one mile to and from school each day (n=1012). The largest percent of students traveling one mile or less to and from college was found at Ellsworth Community College where 76.84 percent indicated they traveled one mile or less (n=95). At Keokuk Community College (n=35) only 8.57 percent indicated they traveled one mile or less to and from school each day. Those traveling from one to nine miles accounted for 29.74 percent of these returning questionnaires (n=1012) with 57.14 percent of the students at Emmetsburg Community College (n=7) indicating they traveled

Table 17. Distance traveled daily going to and from community college by first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966

Community college	N	Less than one mile		1 - 9 miles		10 - 19 miles		Over 20 miles		No response	
		N	%	N	%	N	%	N	%	N	%
Boone	35	14	40.00	8	22.86	3	8.57	9	25.71	1	2.86
Burlington	92	24	26.09	36	39.13	8	8.70	24	26.09	-	-
Centerville	59	29	49.15	6	10.17	3	5.08	20	33.90	1	1.69
Clarinda	52	30	57.69	6	11.54	4	7.69	11	21.15	1	1.92
Clinton	61	13	21.31	27	44.26	5	8.20	15	24.59	1	1.64
Eagle Grove	27	13	48.15	5	18.52	4	14.81	5	18.52	-	-
Ellsworth (Iowa Falls)	95	73	76.84	7	7.37	3	3.16	12	12.63	-	-
Emmettsburg	7	1	14.29	4	57.14	1	14.29	1	14.29	-	-
Estherville	83	51	61.45	14	16.87	2	2.41	14	16.87	2	2.40

Fort Dodge	101	11	10.89	56	55.45	10	9.90	23	22.77	1	.99
Keokuk	35	3	8.57	14	40.00	5	14.29	12	34.29	1	2.86
Marshalltown	97	36	37.11	39	40.21	5	5.15	17	17.53	-	-
Muscatine	57	16	28.07	34	38.60	3	5.26	16	28.07	-	-
North Iowa (Mason City)	133	59	44.3	15	25.56	15	11.28	24	18.05	1	.75
Southwestern (Creston)	47	16	34.04	8	31.91	2	4.26	14	29.79	-	-
Webster City	31	18	58.06	22	25.81	1	3.23	4	12.90	-	-
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Total	1012	407	40.01	301	29.74	74	7.31	221	21.83	9	.88

one to nine miles to and from school each day. At Ellsworth Community College (n=95) only 7.37 percent of those returning questionnaires indicated they traveled from one to nine miles to and from school each day. Those students traveling 10 to 19 miles to and from school each day accounted for 2.41 percent of the students from Estherville Community College (n=83) returning questionnaires while 14.81 percent of the students from Eagle Grove Community College (n=27) returning questionnaires indicated they traveled from 10 to 19 miles to and from school each day with a mean value for the 16 Iowa community colleges of 7.31 percent (n=1012). Keokuk Community College students returning (n=35) questionnaires indicated 34.29 percent traveled over 20 miles to and from school each day and at Ellsworth Community College students traveling over 20 miles to school accounted for 12.63 percent of the questionnaires returned (n=95). Mean value for all questionnaires returned (n=1012) was 21.83 percent of the students traveling 20 miles or more to and from school each day.

Table 18 provides data on the distance student's homes were from the community colleges they attended. Of the students attending one of the 16 Iowa community colleges who returned questionnaires, 518 or 51.18 percent indicated their home was less than 20 miles from the community college they attended. This ranged from a low of 22.11 percent at Ellsworth Community College (n=95) to a high of 77.42 percent of the students at Webster City Community College (n=31). Homes 20 to 39 miles from the community college attended were reported by 189 or 18.68 percent

Table 18. One-way distance from home to community college as reported by first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966

Community college	N	Under 20 miles		20-39 miles		40-59 miles		60-79 miles		Over 80 miles		No response	
		N	%	N	%	N	%	N	%	N	%	N	%
Boone	35	25	71.43	4	11.43	4	11.43	1	2.86	1	2.86	-	-
Burlington	92	66	71.74	12	13.04	6	6.52	4	4.35	4	4.35	-	-
Centerville	59	20	33.90	18	30.51	6	10.17	7	11.86	7	11.86	1	1.69
Clarinda	52	17	32.69	14	20.92	7	13.46	8	15.38	6	11.54	-	-
Clinton	61	39	63.93	15	24.59	5	8.20	1	1.64	-	-	1	1.64
Eagle Grove	27	17	62.96	4	14.81	1	3.70	1	3.70	3	11.11	1	3.70
Ellsworth (Iowa Falls)	95	21	22.11	16	16.84	13	13.68	15	15.79	30	31.58	-	-
Emmettsburg	7	6	85.71	1	14.29	9	-	9	-	24	-	-	-
Estherville	83	29	34.94	12	14.46	9	10.84	9	-	-	-	-	-
Fort Dodge	101	59	58.42	24	23.76	1	8.91	3	2.97	6	5.94	-	-
Keokuk	35	28	80.00	5	14.29	2	5.71	-	-	-	-	-	-
Marshalltown	97	46	47.42	18	18.56	15	15.46	10	10.31	8	8.25	-	-

Muscatine	57	35	61.40	9	15.79	7	12.28	3	5.26	2	3.51	1	1.75
North Iowa (Mason City)	133	60	45.11	29	21.80	13	9.77	6	4.51	25	18.80	-	-
Southwestern	47	26	55.32	7	14.89	8	17.02	2	4.26	4	8.51	-	-
Webster City	31	24	77.42	1	3.23	1	3.23	-	-	5	16.13	-	-
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Total	1012	518	51.18	189	18.68	106	10.47	70	6.91	125	12.36	4	.40

of those returning questionnaires. The largest percent of the students indicating 20-39 miles from home was found at Centerville Community College (n=59) where 30.51 percent indicated this category. Homes 40 to 59 miles from the community college attended accounted for 10.47 percent of those returning questionnaires. Slightly over 17 percent (17.02) indicated this category from Southwestern Community College (n=47) while no students reported this category at Emmetsburg Community College (n=7). Students living from 60 to 79 miles from the community college they attended accounted for 6.91 percent of those returning questionnaires. Three schools, Emmetsburg Community College (n=7), Keokuk Community College (n=35) and Webster City Community College (n=31), had no students respond to this category while 15.79 percent responded at Ellsworth Community College (n=95). The category of home being over 80 miles from the community college was indicated by 12.36 percent of those returning questionnaires. Three schools, Clinton Community College (n=61), Emmetsburg Community College (n=7) and Keokuk Community College (n=35), had no students select this category. Nearly one third, (3.58) of the students from Ellsworth Community College (n=95) indicated their home was over 80 miles away from college.

The marital status of students while attending one of the 16 Iowa community colleges is shown in Table 19. Students enrolled in two of the community colleges, Emmetsburg Community College (n=7) and Eagle Grove Community College (n=27), all reported they were single at the time of enrollment. The lowest percent of married students was reported by students previously enrolled at Southwestern Community College (n=47)

Table 19. Martial status of first-time, full-time, Arts and Science students while enrolled at one of the 16 Iowa community colleges in 1966

Community college	N	<u>Married</u>		<u>Single</u>		<u>No response</u>	
		N	%	N	%	N	%
Boone	35	2	5.71	33	94.29	-	-
Burlington	92	8	8.70	84	91.30	-	-
Centerville	59	5	8.47	53	89.83	1	1.69
Clarinda	52	1	1.92	50	91.15	1	1.92
Clinton	61	2	3.28	58	95.08	1	1.64
Eagle Grove	27	-	-	27	100.00	-	-
Ellsworth (Iowa Falls)	95	7	7.37	87	91.58	1	1.05
Emmettsburg	7	-	-	7	100.00	-	-
Estherville	83	-	-	81	97.59	2	2.41
Fort Dodge	101	9	8.91	92	91.09	-	-
Keokuk	35	3	8.57	32	91.43	-	-
Marshalltown	97	13	13.40	84	86.60	-	-
Muscatine	57	7	12.28	50	87.72	-	-
North Iowa (Mason City)	133	2	1.50	130	97.74	1	.75
Southwestern (Creston)	47	9	19.15	38	80.85	-	-
Webster City	31	1	3.23	30	96.77	-	-
Total	1012	69	6.81	936	92.49	7	.07

at Creston where 80.85 percent reported single status while enrolled. For the 16 Iowa community colleges (n=1012), 92.49 percent of the students reported their status as single while enrolled as contrasted with 6.81 percent indicating married status while enrolled.

Table 20 provides information regarding previous employment of students who entered as first-time, full-time, Arts and Science students in one of the 16 Iowa community colleges in 1966. The majority (73.32 percent) of the students enrolling who returned the Former Student Information Form (n=1012) indicated they had been employed at full-time positions for less than 12 months prior to entering the community college. This was true in every college involved in the study. Students that had enrolled at Burlington Community College (n=92) reported a high of 85.87 percent that had been employed in full-time positions for less than 12 months prior to entering community college. This was contrasted to a low of 64.91 percent of the students at Muscatine Community College (n=57) who indicated they had been employed in a full-time position prior to enrollment. The other categories (n=1012) of 12 to 23 months full-time employment accounted for 6.32 percent in the 16 Iowa community colleges, 3.06 percent of the students indicated employment of 24 to 47 months prior to enrollment and 2.17 percent of the students responding indicated full-time employment of over 48 months prior to enrollment. It should be noted in Table 20 that a number of students (15.11 percent) chose not to respond to this item.

Factors indicated by students responding to the questionnaire as being most important in their selection of the community college as a

Table 20. Full-time employment prior to enrolling in community college as reported by first-time, full-time, Arts and Science students enrolling in one of 16 Iowa community colleges in 1966

Community college	<u>Less than 12 months</u>			<u>12-23 Months</u>		<u>24-47 Months</u>		<u>Over 48 months</u>		<u>No response</u>	
	N	N	%	N	%	N	%	N	%	N	%
Boone	35	27	77.14	5	14.29	2	5.71	-	-	1	2.86
Burlington	92	79	85.87	4	4.35	1	1.09	3	3.26	5	5.43
Centerville	59	47	79.66	4	6.78	2	3.39	1	1.69	5	8.47
Clarinda	52	38	73.08	3	5.77	2	3.85	-	-	9	17.31
Clinton	61	49	80.33	3	4.92	2	3.28	2	3.28	5	8.20
Eagle Grove	27	17	62.96	2	7.41	1	3.70	1	3.70	6	22.22
Ellsworth (Iowa Falls)	95	68	71.58	5	5.26	2	2.11	4	4.21	16	16.84
Emmettsburg	7	6	85.71	-	-	-	-	-	-	1	14.29
Estherville	83	60	72.29	6	7.23	1	1.20	2	2.41	14	16.87
Fort Dodge	101	71	70.30	4	3.96	3	2.97	4	3.96	19	8.91

Keokuk	35	23	65.71	3	8.57	3	8.57	-	-	6	17.14
Marshalltown	97	70	72.16	4	4.12	4	4.12	-	-	19	19.59
Muscatine	57	43	64.91	8	14.04	2	3.51	-	-	10	17.54
North Iowa (Mason City)	133	33	69.92	9	6.77	4	3.01	2	6.38	25	18.80
Southwestern (Creston)	47	24	70.21	4	8.51	2	4.26	3	6.38	5	10.64
Webster City	31	37	77.42	-	-	-	-	-	-	7	22.58
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Total	1012	742	73.32	64	6.32	31	3.06	22	2.17	153	15.11

place to begin their higher education is shown in Tables 21a and 21b. It should be noted that two responses accounted for one-half of the total. "Desire for more education" and "Low cost" were indicated by 49.19 percent of the students (n=1012) as the reasons they chose the community college. "Suggestion of the family" was selected by 13 percent of the students as the major reason with 20.34 percent of the students at Centerville Community College (n=59) indicating this reason to a low of 3.23 percent at Webster City Community College (n=31) and no respondents at Emmetsburg Community College (n=7). "Advice of teachers and counselors" was indicated by 7.61 percent of the total sample (n=1012) with a high of 19.28 percent at Estherville Community College (n=83) and a low of 3.26 percent at Burlington Community College (n=92) and Emmetsburg Community College (n=7) where none of the students responding indicated this reason as a major factor influencing attendance. "Attendance of close friends" was indicated as the major factor of attendance by 8.25 percent of the students completing questionnaires from Marshalltown Community College (n=97) and by only .99 percent at Fort Dodge Community College (n=101) with a mean value of 4.54 percent for the total sample (n=1012).

Section B

Descriptions of first-time, full-time, Arts and Science students during their enrollment at one of the 16 Iowa community colleges in 1966

Table 22 provides information regarding the semester hours credit carried by first-time, full-time Arts and Science students in the 16

Table 21a. Factors influencing community college attendance of Arts and Science students enrolling in 16 Iowa community colleges in 1966

Community college	N	No response		Suggestion of family	
		N	%	N	%
Boone	35	-	-	4	11.43
Burlington	92	-	-	17	18.48
Centerville	59	2	3.39	12	20.34
Clarinda	52	-	-	8	15.38
Clinton	61	1	1.64	2	3.28
Eagle Grove	27	-	-	2	7.41
Ellsworth (Iowa Falls)	95	2	2.11	9	9.47
Emmettsburg	7	-	-	-	-
Estherville	83	-	-	11	13.25
Fort Dodge	101	1	.99	17	16.83
Keokuk	35			4	11.43
Marshalltown	97			13	13.40
Muscatine	57	-	-	4	7.02
North Iowa (Mason City)	133			24	18.05
Southwestern (Creston)	47	1	2.13	4	8.51
Webster City	31	-	-	1	3.23
Total	1012	7	.69	132	13.00

<u>Advice of H.S. faculty</u>		<u>Attendance of close friends</u>		<u>Better job preparation</u>		<u>College taken for granted</u>	
N	%	N	%	N	%	N	%
2	5.71	1	2.86	2	5.71	1	2.86
3	3.26	3	3.26	7	7.61	6	6.52
3	5.08	1	1.69	7	11.86	1	1.69
2	3.85	3	5.77	6	11.54	2	3.85
4	6.56	3	4.92	10	16.39	-	-
2	7.41	1	3.71	3	11.11	-	-
12	12.63	5	5.26	8	8.42	3	3.16
-	-	-	-	2	28.57	-	-
16	19.28	3	3.61	8	9.64	1	1.20
6	5.94	1	.99	12	11.88	3	2.97
1	2.86	1	2.86	3	8.57	2	5.71
8	8.25	8	8.25	13	13.40	3	3.09
5	8.77	4	7.02	5	8.77	2	3.51
9	6.77	10	7.52	13	9.77	11	8.27
2	4.26	1	2.13	3	6.38	2	4.26
2	6.45	1	3.23	2	6.45	2	6.45
77	7.61	46	4.54	104	10.27	39	3.85

Table 21b. Factors influencing community college attendance of Arts and Science students enrolling in 16 Iowa community colleges in 1966

Community college	Desire to defer military service		Nothing better to do		Desire for more education		Low cost		Quality program		Other	
	N	%	N	%	N	%	N	%	N	%	N	%
Boone	3	8.57	2	5.71	13	37.14	4	11.43	1	2.86	2	5.71
Burlington	2	2.17	1	1.09	21	22.83	29	31.52	-	-	3	3.26
Centerville	3	5.08	1	1.69	10	16.95	15	25.42	1	1.69	3	5.08
Clarinda	-	-	1	1.92	14	26.92	13	25.00	1	1.92	2	3.85
Clinton	2	3.28	-	-	12	19.67	22	36.07	1	1.64	4	6.56
Eagle Grove	-	-	1	3.70	8	29.63	8	29.63	-	-	2	7.41
Ellsworth (Iowa Falls)	2	2.11	-	-	23	24.21	18	18.95	3	3.16	10	10.53
Emmettsburg	-	-	-	-	-	-	3	42.86	1	14.29	1	14.29
Estherville	-	-	3	3.61	15	18.07	21	25.30	-	-	5	6.02
Fort Dodge	-	-	-	-	33	32.67	22	21.78	-	-	6	5.94

Keokuk	-	-	-	11	31.43	12	34.29	-	-	1	2.86	
Marshalltown	2	2.06	-	26	28.80	16	16.49	-	-	8	8.85	
Muscatine	1	1.75	1	1.75	13	22.81	19	33.33	1	1.75	2	3.51
North Iowa (Mason City)	2	1.50	1	0.75	19	14.29	38	28.57	1	0.75	5	3.76
Southwestern (Creston)	1	2.13	-	-	15	31.91	13	27.66	1	2.13	4	8.51
Webster City	-	-	-	-	6	19.35	12	38.71	-	-	5	16.13
Total	18	1.77	11	1.08	239	23.61	265	26.18	11	1.08	63	6.23

Table 22. Semester hours of credit carried by first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges during the first semester of enrollment

Community college	Semester hours carried		
	N	Mean	Std. Deviation
Boone	67	15.04	1.86
Burlington	159	13.60	2.91
Centerville	111	12.88	4.69
Clarinda	92	12.17	4.89
Clinton	107	14.02	5.38
Eagle Grove	39	15.77	1.42
Ellsworth (Iowa Falls)	174	13.84	3.75
Emmettsburg	26	14.69	2.90
Estherville	127	14.65	2.23
Fort Dodge	169	14.37	1.48
Keokuk	54	14.57	3.56
Marshalltown	140	15.32	1.76
Muscatine	85	14.75	2.14
North Iowa (Mason City)	246	15.33	1.76
Southwestern (Greston)	68	13.82	2.49
Webster City	50	15.36	1.59
Total	1714	14.34	

Iowa community colleges involved in the study. The mean semester hour load for the 16 community colleges was 14.34 hours (n=1714) with a range from a low of 12.17 semester hours at Clarinda Community College (n=92) to a high of 15.77 semester hours carried at Marshalltown Community College (n=140). A rather wide variance occurs in this area with a narrow standard deviation of 1.42 semester hours occurring at Eagle Grove (n=39) to wide standard deviation of 5.38 semester hours at Clinton Community College (n=107). The wide variance may be due to the differences in maintenance of records at the 16 community colleges. In reviewing data, it appeared that differences in handling records of students who drop courses may account for the range in standard deviation. The mean value for 1697 students enrolled in the 16 Iowa community colleges in 1966 for the number of semester hours completed is 41.25 hours. Table 23 provides data relating to the mean values for each of the 16 community colleges. Clinton Community College (n=159) had the lowest mean value of 35.98 semester hours completed during the students enrollment. The high mean number of hours completed occurred at Emmetsburg Community College (n=26) where students completed an average of 49.19 semester hours. The variance as measured by the standard deviation ranged from a low of 18.33 semester hours at Emmetsburg Community College (n=26) to a wide standard deviation of 25.08 semester hours at Clinton Community College (n=106).

The cumulative grade point average earned at the 16 Iowa community colleges is shown in Table 24. Emmetsburg Community College

Table 23. Total semester hours completed at community college by first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966

Community college	N	Total semester hours earned	
		Mean	Std. Deviation
Boone	67	40.06	21.69
Burlington	159	35.98	21.37
Centerville	111	38.17	23.70
Clarinda	91	36.22	21.73
Clinton	106	43.28	25.08
Eagle Grove	39	42.95	23.06
Ellsworth (Iowa Falls)	174	44.36	20.81
Emmettsburg	26	49.19	18.33
Estherville	126	43.21	20.13
Fort Dodge	168	40.80	24.59
Keokuk	54	47.48	19.53
Marshalltown	140	39.99	20.57
Muscatine	84	43.45	21.75
North Iowa (Mason City)	234	42.27	24.04
Southwestern (Creston)	68	37.34	23.56
Webster City	50	45.14	19.59
Total	1697	41.25	

Table 24. Cumulative grade point average at the community college, first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966

Community college	Cumulative grade point average earned at community college		
	N	Mean	Std. Deviation
Boone	67	1.99	1.01
Burlington	160	1.89	.88
Centerville	111	1.77	.94
Clarinda	92	1.91	1.00
Clinton	106	1.91	.84
Eagle Grove	39	2.05	.86
Ellsworth (Iowa Falls)	174	2.01	.71
Emmettsburg	26	2.29	.70
Estherville	104	2.08	.77
Fort Dodge	169	2.00	.82
Keokuk	54	2.12	.75
Marshalltown	140	2.16	.83
Muscatine	91	1.96	.72
North Iowa (Mason City)	175	2.02	.85
Southwestern (Creston)	68	1.75	1.02
Webster City	50	2.18	.85
Total	1626	1.99	

students (n=26) earned the highest cumulative grade point average of the 16 schools involved in the study of 2.29. This school also had the lowest standard deviation of .70 points. The lowest grade point average was shown at Southwestern Community College (n=68) where a grade point average of 1.75 was reported. The widest range of variance as measured by standard deviation (1.01 points) was also found at Southwestern Community College. The overall grade point average for the 16 Iowa community colleges was 1.99.

Table 25 provides information on the number of semesters the first-time, full-time students enrolled in the 16 Iowa community colleges in 1966 completed at the community college. Information available on 1706 students enrolled indicates the mean number of semesters was slightly under three semesters (2.97) work completed at the community college. The range was from a mean value of 2.76 semesters attended at Clarinda Community College (n=92) to a high of 3.41 semesters mean attendance by students enrolled at Keokuk Community College (n=54). A rather narrow range as measured by standard deviation existed in all cases. Emmetsburg Community College (n=26) had a standard deviation of .88 semesters for a low to a high of 1.39 semesters at Eagle Grove Community College (n=39).

Numbers and percentages of students who transferred to a four-year college or university following their enrollment at one of the community colleges is shown in Table 26. Of the 1012 students returning questionnaires, 590 or 58.30 percent indicated they had transferred

Table 25. Number of semesters of community college attendance of first-time, full-time, Arts and Science students in 1966 in the 16 Iowa community colleges

Community college	N	Number of semesters enrolled	
		Mean	Std. Deviation
Boone	67	2.79	1.25
Burlington	160	2.85	1.36
Centerville	111	2.78	1.32
Clarinda	92	2.76	1.21
Clinton	107	2.82	1.23
Eagle Grove	39	2.90	1.39
Ellsworth (Iowa Falls)	174	3.08	1.15
Emmettsburg	26	3.31	.88
Estherville	126	3.00	1.28
Fort Dodge	169	3.02	1.28
Keokuk	54	3.41	1.16
Marshalltown	140	2.89	1.23
Muscatine	89	3.15	1.03
North Iowa (Mason City)	234	3.02	1.38
Southwestern (Creston)	68	2.87	1.37
Webster City	50	3.24	1.13
Total	1706	2.97	

Table 26. Numbers and percentages of first-time, full-time, Arts and Science students who entered 16 Iowa community colleges in 1966 who transferred to a four-year college

Community college	Transfer to <u>four-year school</u>			<u>Terminal</u>		<u>No response</u>	
	N	N	%	N	%	N	%
Boone	35	20	57.14	15	42.86		
Burlington	92	47	51.09	44	47.83	1	1.09
Centerville	59	39	66.10	19	32.20	1	1.69
Clarinda	52	35	67.31	17	32.69		
Clinton	61	34	55.74	27	44.26		
Eagle Grove	27	17	62.96	10	37.04		
Ellsworth	95	51	53.68	44	46.32		
Emmettsburg	7	5	71.43	2	28.57		
Estherville	83	45	54.22	37	44.58	1	1.20
Fort Dodge	101	67	66.34	34	33.66		
Keokuk	35	17	48.57	18	51.43		
Marshalltown	97	56	57.73	41	42.27		
Muscatine	57	32	56.14	25	43.86		
North Iowa (Mason City)	133	71	53.38	61	45.86	1	.75
Southwestern (Creston)	47	34	72.34	13	27.66		
Webster City	31	20	64.52	11	35.48		
Total	1012	590	58.30				

from the community college to a four-year college or university to work toward completion of a degree. This ranged from a high of 72.34 percent (n=47) at Southwestern Community College located at Creston to a low of 48.57 percent at Keokuk Community College (n=35) who indicated transfer. It should be noted that Keokuk Community College (n=35) was the only school having a terminal percentage of students greater than 50 percent with most of the community colleges in the 30 to 50 percent terminal student range.

Table 27 describes information relative to the type of housing accommodations the first-time, full-time, Arts and Science students enrolled in 1966 at Iowa community colleges reported they had during their enrollment at community college. Since community colleges are typically looked upon as commuter colleges Table 27 could be viewed in two parts. First, those who indicated they either lived in their parents home or rented their own home while attending community college. Of the 1012 students returning questionnaires 598 or 59.09 percent indicated this to be the case. This group ranged from a high of 100 percent living in their own home or renting a home at Keokuk Community College (n=35) to a low of 22.11 percent at Ellsworth Community College (n=95) who lived in their parents home or rented their own home. Second, the group who either rented a room or apartment or lived in a dormitory situation while attending community college. Combining these groups appears more realistic since only three of the community colleges, namely Ellsworth Community College at Iowa Falls, Clarinda Community

Table 27. Type of housing accommodations reported by first-time, full-time, Arts and Science students enrolling in 16 Iowa community colleges in 1966

Community college	N	Lived at home or own home		Rented room or apartment		Dormitory		No Response	
		N	%	N	%	N	%	N	%
		Boone	35	28	80.00	6	17.14	1	2.86
Burlington	92	75	81.52	15	16.30	2	2.17	-	-
Genterville	59	31	52.54	25	42.37	1	1.69	2	3.39
Clarinda	52	23	44.23	13	25.00	16	30.77	-	-
Clinton	61	45	73.77	14	22.95	1	1.64	1	1.64
Eagle Grove	27	19	70.37	8	29.63	-	-	-	-
Ellsworth (Iowa Falls)	95	21	22.11	53	55.79	21	22.11	-	-
Emmettsburg	7	6	85.71	1	14.29	-	-	-	-
Estherville	83	33	39.76	25	30.12	25	30.12	-	-
Fort Dodge	101	64	63.37	37	36.63	-	-	-	-
Keokuk	35	35	100.00	-	-	-	-	-	-
Marshalltown	97	56	57.73	35	36.08	6	6.19	-	-
Muscatine	57	36	63.16	21	36.84	-	-	-	-
North Iowa (Mason City)	133	76	57.14	54	40.60	1	.75	2	1.50
Southwestern (Creston)	47	27	57.45	20	42.55	-	-	-	-
Webster City	31	23	74.19	6	19.35	2	6.45	-	-
Total	1012	598	59.09	333	32.90	76	7.50	5	.51

College and Estherville Community College had extensive dormitory facilities in 1966. This group of schools had a number of students in dormitories: Ellsworth Community College (n=95) 22.11 percent, Clarinda Community College (n=52) 30.77 percent, and Estherville Community College (n=80) 30.12 percent. The remainder of the schools either had a very low percentage or no persons living in residence halls. Rented rooms accounted for 32.90 percent of the total sample (n=1012) and dormitories accounted for only 7.5 percent of the total sample (n=1012). Combining the last two categories revealed a total split of approximately 60 percent commuters and 40 percent renting rooms or living in a dormitory with a range of 100 percent commuting and no students renting rooms at Keokuk Community College (n=35) to only 22.11 percent commuting and 77.90 percent living in rented rooms or dormitories at Ellsworth Community College (n=95).

Table 28a and b provides information relative to the extra-curricular activities of first-time, full-time Arts and Science students enrolled in 16 Iowa community colleges in 1966. Students were asked to indicate the activity they were most actively engaged in while enrolled in community college. It should be noted in reviewing the information that the largest percentage (44.17 percent) of students indicated they did not take part in extra-curricular activities while attending community college (n=1012). Range of responses was from 68.42 percent of the students at North Iowa Area Community College at Mason City (n=133) indicating they were not involved in activities to a low of 19.30 percent at Muscatine Community College indicating no involvement in

Table 28a. Extra-curricular activities participated in by students in 16 Iowa community colleges in 1966

Community college	Inter collegiate athletics			Intramural athletics		Music, drama		Student government		College wide clubs	
	N	N	%	N	%	N	%	N	%	N	%
Boone	35	2	5.71	-	-	4	11.43	2	5.71	3	8.57
Burlington	92	1	1.09	3	3.26	10	10.87	1	1.09	5	5.43
Centerville	59	10	16.95	12	20.34	6	10.17	1	1.69	1	1.69
Clarinda	52	6	11.54	7	13.46	10	19.23	1	1.92	1	1.92
Clinton	61	7	11.48	4	6.56	7	11.48	2	3.28	5	8.20
Eagle Grove	27	4	14.81	4	14.81	3	11.11	1	3.70	2	7.41
Ellsworth (Iowa Falls)	95	17	17.89	15	15.79	18	18.95	1	1.05	13	13.68
Emmettsburg	7	-	-	-	-	2	2.57	-	-	5	14.29
Estherville	83	15	18.07	15	18.07	16	19.28	2	2.41	5	6.02
Fort Dodge	101	7	6.93	9	8.91	10	9.90	5	4.95	3	2.97

Keokuk	35	3	8.57	3	8.57	5	14.29	2	5.71	3	8.57
Marshalltown	97	7	7.22	19	19.59	8	8.25	4	4.12	4	4.12
Muscatine	57	6	10.53	11	19.30	12	21.05	3	5.26	8	14.04
North Iowa (Mason City)	133	10	7.52	4	3.01	10	7.52	4	3.01	3	2.26
Southwestern (Creston)	47	5	10.64	6	12.77	9	19.15	1	2.13	5	10.64
Webster City	31	6	19.35	6	19.35	5	16.13	-	-	3	9.68
Total		<u>106</u>	<u>10.47</u>	<u>118</u>	<u>11.66</u>	<u>135</u>	<u>13.34</u>	<u>30</u>	<u>2.96</u>	<u>65</u>	<u>6.42</u>

Table 28b. Extra-curricular activities participated in by students in 16 Iowa community colleges in 1966

Community College	<u>Departmental Clubs</u>		<u>Other</u>		<u>None</u>		<u>No Response</u>	
	N	%	N	%	N	%	N	%
Boone	4	11.43	-	-	20	57.14	-	-
Burlington	3	3.26	11	11.96	58	63.05	-	-
Centerville	4	6.78	2	3.39	22	37.29	1	1.96
Clarinda	3	5.77	3	5.77	21	40.38		
Clinton	3	4.92	4	6.56	28	45.90	1	1.64
Eagle Grove	2	7.41	2	7.41	9	33.33	-	-
Ellsworth (Iowa Falls)	6	6.32	2	2.11	21	22.11	2	2.11
Emmettsburg	-	-	1	14.29	3	42.86		
Estherville	4	4.82	4	4.82	20	24.20	2	2.41
Fort Dodge	6	5.94	7	6.93	53	52.48	1	.99
Keokuk	2	5.71	1	2.86	16	45.71	-	-
Marshalltown	1	1.03	4	4.12	50	51.55	-	-
Muscatine	2	3.51	3	5.26	11	19.30	1	1.75
North Iowa (Mason City)	1	.75	6	4.51	91	68.42	4	3.01
Southwestern (Creston)	-	-	3	6.38	16	34.04	2	4.26
Webster City	1	3.26	1	3.23	8	25.81	1	3.23
Total	42	4.15	54	5.33	447	44.17	15	1.50

activities (n=57). The largest category for involvement in activities was the Music-Drama area. This ranged from a high of 21.05 percent at Muscatine Community College (n=57) to a low of 2.57 percent at Emmetsburg Community College (n=7) with a mean value for all students of 13.34 percent (n=1012). Other areas indicated by a number of students included intramural athletics which accounted for 11.66 percent of the total sample (n=1012) with students from Centerville Community College (n=59) indicating intramural athletics as the major activity in 20.34 percent of the returns and a low of 3.01 percent at North Iowa Area Community College at Mason City (n=133) indicating intramural athletics. Inter-collegiate athletics participation ranged from 19.35 percent at Webster City Community College (n=31) being active in this area to a low of 1.09 percent at Burlington Community College (n=35) with a mean value for students from the 16 Iowa community colleges of 10.47 (n=1012). Other areas typically were not reported as frequently with the exception of college-wide clubs at four schools. Emmetsburg Community College, 14.29 percent (n=7); Muscatine Community College, 14.04 percent (n=57); Ellsworth Community College, 13.68 percent (n=95); and Southwestern Community College at Creston, 10.64 percent (n=47). The mean value for all students returning questionnaires from the 16 Iowa community colleges was 6.42 percent (n=1012).

Table 29 indicates that over 40 percent (41.50) of the students returning questionnaires (n=1012) earned 75-100 percent of their community college expenses. This ranged from a high of 57.38 percent of

Table 29. Percent of total college expenses earned while attending one of 16 Iowa community colleges by first-time, full-time community college students enrolled in 1966

Community college	<u>0-24 Percent</u>		<u>25-49 Percent</u>		<u>50-74 Percent</u>		<u>75-100 Percent</u>		<u>No response</u>	
	N	N %	N %	N %	N %	N %	N %	N %		
Boone	35	11 31.43	2 5.71	8 22.86	14 30.00	-	-			
Burlington	92	34 36.96	4 4.35	11 11.96	43 46.74	-	-			
Centerville	59	18 30.51	8 13.56	13 22.03	18 30.51	2 3.39				
Clarinda	52	13 25.00	13 25.00	9 17.31	17 32.96	-	-			
Clinton	61	12 19.67	5 8.20	8 13.11	35 57.38	1 1.64				
Eagle Grove	27	8 29.63	5 18.52	4 14.81	10 37.04	-	-			
Ellsworth (Iowa Falls)	95	32 33.68	16 16.84	20 21.05	26 27.37	1 1.05				
Emmettsburg	7	4 57.14	- -	- -	3 42.86	-	-			
Estherville	83	25 30.12	14 16.87	6 7.23	36 43.37	2 2.41				
Fort Dodge	101	27 26.73	16 15.84	16 15.84	42 41.58	-	-			

Keokuk	35	14	40.00	3	8.57	3	8.57	14	40.00	1	2.86
Marshalltown	97	27	27.84	11	11.34	11	11.34	47	48.45	1	1.03
Muscatine	57	11	19.30	9	15.79	5	8.77	31	54.39	1	1.75
North Iowa (Mason City)	133	46	34.59	20	15.04	15	11.28	51	38.35	1	.75
Southwestern (Creston)	47	14	29.79	8	17.02	7	14.89	18	38.30	-	-
Webster City	31	11	35.48	4	12.90	1	3.23	15	48.39	-	-
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Total	1012	307	30.33	138	13.63	137	13.53	420	41.50	10	1.01

the students at Clarinda Community College (n=52) earning 75-100 percent of their expenses, to a low of 27.37 percent at Ellsworth Community College (n=95) earning their college expenses. The category of 50-74 percent expenses earned by the student accounted for 13.53 percent of the total returning questionnaires (n=1012) with a high of 21.05 percent at Ellsworth Community College (n=95) to a low of 3.23 percent at Webster City Community College (n=31). The 25-49 percent expenses earned accounted for 13.63 percent of the total sample with a high of 18.52 percent at Eagle Grove Community College (n=27) to a low of 4.35 percent at Burlington Community College (n=92). The 0-24 percent range of expenses earned accounted for 30.33 percent of the total sample (n=1012) with Keokuk Community College students (n=35) reporting 40 percent in this range and Muscatine Community College (n=57) students reporting 19.30 percent in this category. If totals for over 50 percent expenses earned and those under 50 percent earned are compared, the total sample (n=1012) indicates 55.03 percent of the community college students earned over one-half of their college expenses. Students from Clinton Community College (n=61) indicate 27.87 percent earned less than one-half of their expenses while 70.44 percent earned greater than one-half of their expenses. This is contrasted to Emmetsburg Community College (n=7) where 57.14 percent of the students indicated they earned less than one-half of their college expenses and 42.86 percent indicated earning greater than one-half of their college expenses.

Table 30 provides information relative to the number of hours per week first-time, full-time students enrolled in 1966 worked while attending community college. Those students reporting no work while attending college ranged from a low of 14.04 percent at Muscatine Community College (n=57) to a high of 35.79 percent at Ellsworth Community College (n=95) with the mean value of 21.94 percent for the 16 Iowa community colleges based on the 1012 questionnaires returned. Those working under nine hours while attending community college accounted for 11.36 percent of those returning questionnaires (n=1012) with a high value of 16.95 percent at Centerville Community College (n=59) and a low value of 4.92 percent at Clinton Community College (n=61). The category 10-19 hours worked accounted for 21.94 percent of the questionnaires returned (n=1012) with a high value of 34.62 at Clarinda Community College (n=52) and a low value of 8.57 percent of those returned from Boone Community College (n=35). Those students indicating work in the range of 20-29 hours per week accounted for 24.81 percent of the questionnaires returned from all community colleges (n=1012) with a low of 8.42 percent at Ellsworth Community College at Iowa Falls (n=95) to a high of 40.98 percent at Clinton Community College (n=61). Students from Boone Community College (n=35) working from 20-39 hours per week accounted for 28.57 percent of those returning questionnaires while no students reported this category from Emmetsburg Community College (n=7) and 6.19 percent from Marshalltown Community College (n=97) reported working 30-39 hours per week. One-hundred thirty-three students (13.14 percent) of

Table 30. Number of hours worked per week while attending community college as reported by first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966

Community college	N	No response		None	
		N	%	N	%
Boone	35	-	-	5	14.29
Burlington	92	-	-	24	26.09
Centerville	59	2	3.39	9	15.25
Clarinda	52	-	-	9	17.31
Clinton	61	1	1.64	9	14.75
Eagle Grove	27			5	18.52
Ellsworth (Iowa Falls)	95	2	2.11	34	35.79
Emmettsburg	7	-	-	2	28.57
Estherville	83	3	3.61	27	32.53
Fort Dodge	101	-	-	20	19.80
Keokuk	35	1	2.86	5	14.29
Marshalltown	97	1	1.03	19	19.59
Muscatine	57			8	14.04
North Iowa (Mason City)	133	1	.75	30	22.56
Southwestern (Creston)	47	-	-	10	21.28
Webster City	31	1	3.23	6	19.35
Total	1012	12	1.18	222	21.94

<u>1-9 Hours</u>		<u>10-19 Hours</u>		<u>20-29 Hours</u>		<u>30-39 Hours</u>		<u>Over 40</u>	
N	%	N	%	N	%	N	%	N	%
4	11.43	3	8.57	11	31.43	10	28.57	2	5.71
9	9.78	15	16.30	29	31.52	10	10.87	5	5.43
10	16.95	13	22.03	18	30.51	5	8.47	2	3.39
7	13.46	18	34.62	12	23.08	5	9.62	1	1.92
3	4.92	10	16.39	25	40.98	8	13.11	5	8.20
2	7.41	3	11.11	11	40.74	2	7.41	4	14.81
12	12.63	23	24.21	8	8.42	10	10.53	6	6.32
1	14.29	2	28.57	2	28.57	-	-	-	-
11	13.25	9	10.84	17	20.48	13	15.66	3	3.61
11	10.89	20	19.80	26	25.74	17	16.83	7	6.93
5	14.29	7	20.00	6	17.14	7	20.00	4	11.03
6	6.19	30	30.93	27	27.84	6	6.19	8	8.25
6	10.53	18	31.58	15	26.32	8	14.04	2	3.51
18	13.53	29	21.80	34	25.56	19	14.29	2	1.50
5	10.64	12	25.53	5	10.64	9	19.15	6	12.77
5	16.13	10	32.26	5	16.13	4	12.90	-	-
115	11.36	222	21.94	251	24.81	133	13.14	57	5.63

the total sample reported working from 30-39 hours per week. Students working over 40 hours per week accounted for 5.63 percent of the questionnaires returned with 14.81 percent of the students from Eagle Grove Community College (n=27) indicating: this response and a low of no students from Emmetsburg Community College (n=7) and Webster City Community College (n=31) showing this response. It should be noted that for the 16 Iowa community colleges over 43 percent of the students reported working 20 or more hours per week while attending community college with slightly over one-fourth (25.27 percent) of the students at Ellsworth Community College (n=95) reporting 20 or more hours per week and a high of 65.65 percent of those students at Boone Community College (n=35) reporting 20 or more hours per week of work while attending college.

Slightly under one-third (32.04 percent) of the sample of the first-time, full-time, Arts and Science students who entered one of Iowa's 16 community colleges in 1966 graduated from the community college (n=1726) with slightly over two-thirds dropping school prior to completing requirements for a degree. Table 31 provides data on the number of students and percentage who received degrees from the community colleges. Eagle Grove Community College (n=39) had 48.72 percent of the sample of entering Arts and Science students in 1966 receive degrees from their school. This represented the largest graduating percentage. The lowest percent of graduates occurred at Marshalltown Community College (n=140) where 21.43 percent of the sample graduated with 78.57 percent dropping

Table 31. Number of students in 16 Iowa community colleges who entered in 1966 and graduated from the community college

Community college	N	Received a Community college degree			
		Yes		No	
		N	%	N	%
Boone	67	19	28.36	48	71.64
Burlington	160	43	26.88	117	73.13
Centerville	112	46	41.07	66	58.93
Clarinda	93	21	22.58	72	77.42
Clinton	108	39	36.11	69	63.89
Eagle Grove	39	19	48.72	20	51.28
Ellsworth (Iowa Falls)	174	58	33.33	116	66.67
Emmettsburg	26	10	38.46	16	61.54
Estherville	127	54	42.52	73	57.48
Fort Dodge	169	47	27.81	122	72.19
Keokuk	54	22	40.74	32	59.26
Marshalltown	140	30	21.43	110	78.57
Muscatine	93	39	41.94	54	58.07
North Iowa (Mason City)	245	70	28.57	175	71.43
Southwestern (Creston)	68	16	23.53	52	76.47
Webster City	50	20	40.00	30	60.00
Total	1725	553	32.04	1173	67.96

enrollment prior to finishing a degree.

Table 32 provides information regarding the status of students as they left the community colleges. Of the 1725 students involved in the sample 1347 or 78.10 percent were listed as "good standing" when they left the community college they attended, 195 or 11.30 percent were listed as being on "academic probation" and 159 or 9.21 percent were requested to leave because of poor academic records. A wide range occurred across the 16 community colleges studied. At North Iowa Area Community College in Mason City (n=245) 225 or 91.86 percent of the sample studied were categorized as being "good standing" when they terminated. North Iowa Area Community College at Mason City (n=245) indicated no students in the sample on "academic probation" when they terminated enrollment and only 3.70 percent at Keokuk Community College (n=54) were listed as being on academic probation. In contrast 26.88 percent of the students at Muscatine Community College (n=93) were on "academic probation" when terminating enrollment, a wide range exists in the category of "dismissal" for academic reasons in the 16 community colleges. Four schools: Centerville Community College (n=112), Clinton Community College (n=108), Emmetsburg Community College (n=26) and Southwestern Community College at Creston (n=68) indicated no students were dropped because of low grades. Two schools: Boone Community College (n=67) and Burlington Community College (n=160) indicated over one-fourth of the students entering in 1966 were dismissed because of low grades. Students in this category accounted for 25.37 percent of the sample at Boone

Table 32. Terminating status of students enrolling in 16 Iowa community colleges in 1966

Community college	<u>Good standing</u>			<u>Probation</u>		<u>Dismissal</u>		<u>No response</u>	
	N	N	%	N	%	N	%	N	%
Boone	67	38	56.72	12	17.91	17	25.37		
Burlington	160	92	57.50	23	14.38	45	28.13		
Centerville	112	98	87.50	13	11.61	-	-	1	.89
Clarinda	93	74	79.57	11	11.83	7	7.53	1	1.08
Clinton	108	93	86.11	11	10.19	-	-	4	3.70
Eagle Grove	39	33	84.62	5	12.82	1	2.56		
Ellsworth (Iowa Falls)	174	146	83.91	12	6.90	16	9.20		
Emmettsburg	26	24	92.31	2	7.69	-	-		
Estherville	127	91	71.65	14	11.02	20	15.75	2	1.57
Fort Dodge	169	127	75.15	10	11.24	23	13.61		
Keokuk	54	49	90.74	2	3.70	3	5.56		
Marshalltown	140	106	75.71	21	15.00	13	9.29		

Muscatine	93	62	66.67	25	26.88	5	5.38	1	1.08
North Iowa (Mason City)	245	225	91.86	-	-	5	2.03	15	.75
Southwestern (Creston)	68	45	66.18	23	33.82	-	-		
Webster City	50	44	88.00	2	4.00	4	8.00		
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Total	1725	1347	78.10	195	11.30	159	9.21	24	1.39

Community College and 28.13 percent of the sample at Burlington Community College.

Section C

Descriptions of first-time, full-time, Arts and Science students enrolling in 16 Iowa community colleges in 1966 after transferring to a four-year college or university

This section deals specifically with the students who entered one of the 16 Iowa community colleges as a first-time, full-time, Arts and Science student in the fall of 1966 and decided to transfer to a four-year college or university. The section deals specifically with five aspects of the transfer student. First, the numbers who choose to transfer following their enrollment at a community college; second, the type of institution they choose to transfer to; third, the number of semester hours completed at the transfer institution; fourth, the number of semesters enrolled at the transfer institution and fifth, numbers graduating from the transfer institution.

Table 33 presents information relative to the numbers of students who choose to transfer to a four year college or university following their enrollment at the community college. Of the 1012 persons who returned the Former Student Information Form, which represented a return of 58.63 percent of those sent, 590 or 58.30 percent of the students indicated they had transferred following their enrollment at one of the

Table 33. Number of students transferring to four year colleges and universities who enrolled in 16 Iowa community colleges in 1966

Community college	N	<u>Transfer</u>		<u>Nontransfer</u>		<u>No response</u>	
		N	%	N	%	N	%
Boone	35	20	57.14	15	42.86		
Burlington	92	47	51.09	44	47.83	1	1.09
Centerville	59	39	66.10	19	32.20	1	1.69
Clarinda	52	35	67.31	17	32.69		
Clinton	61	34	55.74	27	44.26		
Eagle Grove	27	17	62.96	10	37.04		
Ellsworth (Iowa Falls)	95	51	53.68	44	46.32		
Emmettsburg	7	5	71.43	2	28.57		
Estherville	83	45	54.22	37	44.58	1	1.20
Fort Dodge	101	67	66.34	34	33.66		
Keokuk	35	17	48.57	18	51.43		
Marshalltown	97	56	57.73	41	42.27		
Muscatine	57	32	56.14	25	43.86		
North Iowa (Mason City)	133	71	53.38	61	45.86	1	.5
Southwestern (Creston)	47	34	72.34	13	27.66		
Webster City	31	20	64.52	11	35.48		
Total	1012	590	58.30	418	41.30	4	.40

16 Iowa community colleges and 418 or 41.30 percent indicated they did not transfer following community college enrollment. This ranged from a high of 72.34 percent indicating transfer at Southwestern Community College at Creston (n=47) to a low of 48.57 percent indicating transfer at Keokuk Community College (n=35). It should be noted that with the exception of Keokuk Community College the number of students transferring following community college enrollment exceeded 50 percent of the total returning questionnaires.

Table 34 provides a picture of the type of schools those students who transferred selected. Of the 575 students who supplied information regarding the transfer institution, 198 or 34.43 percent selected a public out-of-state school with a range of 5.00 percent at Boone Community College (n=20) to a high of 62.16 percent at Centerville Community College (n=37). Students transferring to private colleges and universities both in and out of state accounted for 101 of the 575 students or 17.57 percent. The range for private schools was a high of 35.29 percent at Eagle Grove Community College (n=17) and Keokuk Community College (n=17) to no students selecting private schools at Emmetsburg Community College (n=5) and 6.25 percent at Southwestern Community College at Creston (n=32) the largest number of transfer students chose one of the three state universities in Iowa. Of the 575 students, 276 or 48 percent selected Iowa State University, University of Iowa or University of Northern Iowa. Range for the 16 Iowa community colleges was from 75 percent at Marshalltown Community College (n=54) selecting one of the Iowa universities to a low of 20 percent

Table 34. Type of institution which first-time, full-time students in Arts and Science programs in 16 Iowa community colleges in 1966 who chose to transfer selected

Community College		Public Out of State		Private in and Out of State		Public State Universities	
		N	%	N	%	N	%
Boone	20	1	5.00	4	20.00	15	75.00
Burlington	42	11	26.19	7	16.67	24	57.14
Centerville	37	23	62.16	6	16.22	8	21.62
Clarinda	35	21	60.00	7	20.00	7	20.00
Clinton	34	13	38.24	5	14.70	16	47.06
Eagle Grove	17	2	11.77	6	35.29	9	52.94
Ellsworth (Iowa Falls)	51	10	19.61	9	17.65	32	62.74
Emmettsburg	5	2	40.00	-	-	3	60.00
Estherville	45	26	57.78	10	22.22	9	20.00
Fort Dodge	64	19	29.68	10	15.63	35	54.69
Keokuk	17	8	47.06	6	35.29	3	17.65
Marshalltown	54	7	12.97	8	14.81	39	72.22
Muscatine	32	6	18.75	6	18.75	20	62.50
North Iowa (Mason City)	70	26	37.14	13	18.57	31	44.29
Southwestern (Creston)	32	15	46.88	2	6.24	15	46.88
Webster City	20	8	40.00	2	10.00	10	50.00
Total	575	198	34.43	101	17.57	276	48.00

selecting an Iowa University at Estherville Community College (n=45) and Clarinda Community College (n=35). It should be noted that over three-fourths of the students (82.43 percent) chose to transfer to a public institution either in Iowa or out-of-state. The geographic location is evident in the selection of an out-of-state school. Iowa border schools, i.e. Centerville Community College, Clarinda Community College and Estherville Community College all have high out-of-state transfers and all have out-of-state schools within relatively short distances.

The mean grade point averages for students who transfer are shown in Table 35. The mean grade point average for those who transferred to a four year college and data was available was 2.39. This ranged from a high of 2.81 for students transferring from Keokuk Community College (n=16) to a low of 2.11 for students from Muscatine Community College (n=32). The standard deviation ranged from a high of .92 for students from Boone Community College to a low of .53 for students from Southwestern Community College at Creston.

The number of semester hours of credit completed at the transfer institution by former community college students is shown in Table 36. The mean value for 569 students on which information was available from the transfer institution was 58.80 semester hours of credit earned at the transfer institution. It should be noted that quarter hour data was converted to semester hour equivalents for computational purposes. The range was from a mean low of 45.72 semester hours credit earned by students at Muscatine Community College (n=32) to a mean high of 69.20

Table 35. Mean grade point average at transfer institution for first-time, full-time, Arts and Science students who entered 16 Iowa community colleges in 1966

Community college	N	Mean	Std. Deviation
Boone	21	2.32	.92
Burlington	39	2.55	.53
Centerville	37	2.41	.69
Clarinda	37	2.37	.80
Clinton	34	2.42	.63
Eagle Grove	16	2.26	.71
Ellsworth (Iowa Falls)	50	2.27	.63
Emmettsburg	5	2.44	.74
Estherville	42	2.20	.70
Fort Dodge	64	2.56	.68
Keokuk	16	2.81	.47
Marshalltown	51	2.46	.66
Muscatine	32	2.11	.88
North Iowa (Mason City)	73	2.41	.64
Southwestern (Creston)	28	2.38	.53
Webster City	20	2.42	.91
Total	565	2.39	

Table 36. Number of hours completed at transfer institution by students enrolled in 16 Iowa community colleges in 1966

Community college	N	Mean	Std. Deviation
Boone	21	50.43	30.49
Burlington	39	60.82	28.02
Centerville	37	58.32	28.79
Clarinda	37	59.49	33.18
Clinton	34	54.53	26.35
Eagle Grove	16	62.00	33.72
Ellsworth (Iowa Falls)	50	57.74	28.82
Emmettsburg	5	69.60	25.81
Estherville	42	57.19	27.01
Fort Dodge	65	63.85	32.19
Keokuk	17	63.82	27.10
Marshalltown	52	64.90	26.63
Muscatine	32	45.72	24.69
North Iowa (Mason City)	74	57.05	25.99
Southwestern (Greston)	28	60.35	24.59
Webster City	20	60.35	24.59
Total	569	58.80	

semester hours of credit earned by students from Emmettsburg Community College (n=5) and 64.90 semester hours credit earned by students from Marshalltown Community College. Variance as measured by standard deviation ranged from a high of 33.72 semester hours at Eagle Grove Community College (n=16) to a low standard deviation of 24.59 semester hours at Webster City Community College (n=20).

Table 37 indicates the present status of students who transferred to four-year colleges and universities. Approximately one-half (49.75 percent) of the students who chose to transfer to four-year colleges and universities had graduated at the time information was gathered (n=611). Another 19.31 percent of the group had dropped from school after transferring. Dismissal for academic reasons accounted for 6.05 percent and 1.80 percent were indicated as transfer students. Those students who were still enrolled at the time the survey was taken accounted for 15.22 percent of the sample. Range of graduates was from a low at 31.43 percent at Muscatine Community College (n=35) which also had 22.86 percent of their students still enrolled in the four-year school. The upper end of the range was at Emmettsburg Community College (n=5) where 80 percent of those who transferred had completed degrees and at Keokuk Community College (n=19) where 63.17 percent had received degrees. The largest percent of drops occurred among students at Boone Community College (n=21) where 47.62 percent had dropped from the four-year college or university prior to completion of a degree. The lowest drop rate occurred among students from Keokuk Community College (n=19)

Table 37. Number of students completing a baccalaureate degree that enrolled in 16 Iowa community colleges in 1966 and transferred

Community college	<u>Graduate</u>		
	N	N	%
Boone	21	9	42.86
Burlington	48	24	50.00
Centerville	37	18	48.65
Clarinda	37	17	45.95
Clinton	40	20	50.00
Eagle Grove	18	7	38.89
Ellsworth (Iowa Falls)	52	25	48.08
Emmettsburg	5	4	80.00
Estherville	46	18	39.13
Fort Dodge	68	41	68.29
Keokuk	19	12	63.16
Marshalltown	56	32	57.14
Muscatine	35	11	31.43
North Iowa (Mason City)	80	37	46.25
Southwestern (Creston)	28	17	60.71
Webster City	21	12	57.14
Total	611	304	49.75

<u>Dropped</u>		<u>Dismissed</u>		<u>Enrolled</u>		<u>Transfer</u>		<u>No information</u>	
N	%	N	%	N	%	N	%	N	%
10	47.62	-	-	2	9.52	-	-	-	-
6	12.50	3	6.25	5	10.42	1	2.08	9	18.75
6	16.22	4	10.81	9	24.32	-	-	-	-
7	18.92	2	5.41	8	21.62	3	8.11	-	-
9	22.50	1	2.50	4	10.00	-	-	6	15.00
4	22.22	1	5.56	4	22.22	-	-	2	11.11
8	15.38	8	15.38	7	13.46	1	1.92	3	5.77
1	20.00	-	-	-	-	-	-	-	-
13	28.26	2	4.35	8	17.39	-	-	5	10.87
13	19.12	2	2.94	7	10.29	2	2.94	3	4.41
1	5.26	-	-	3	15.79	1	5.26	2	10.53
8	14.29	4	7.14	5	8.93	1	1.79	6	10.71
6	17.14	6	17.14	8	22.86	1	2.86	3	8.57
14	17.50	4	5.00	16	20.00	1	1.25	8	10.00
7	25.00	-	-	4	14.29	-	-	-	-
5	23.81	-	-	3	14.29	-	-	1	4.76
118	19.31	37	6.05	93	15.22	11	1.80	48	7.87

where 5.26 percent dropped prior to receiving a degree. Centerville Community College (n=37) had 24.32 percent of the students transferring still enrolled and working toward a degree. Marshalltown Community College (n=56) had the lowest percent still working toward a degree.

Table 38 indicates the mean number of semesters attended by community college students that transferred to four-year schools. For purposes of computation, quarters have been equated as nearly as possible to semesters. Emmetsburg Community College (n=5) students who transferred had a mean of 5.20 semesters of attendance at the four-year school with a variance as measured by standard deviation of 1.48 semesters. Muscatine Community College (n=32) had a mean of 3.47 semesters attendance at the four-year school with a standard deviation of 1.61 semesters. The largest standard deviation occurred at Estherville Community College (n=42) where the mean value was 4.24 semesters and a standard deviation of 2.29 semester hours. The mean value for the 16 community colleges was slightly over four semesters of attendance at the four-year school (4.23 semesters).

Section D

Descriptions of first-time, full-time, Arts and Science students enrolling in 16 Iowa community colleges in 1966 regarding present status

Table 39 provides information on future educational plans of first-time, full-time, Arts and Science students who enrolled in 16 Iowa community colleges in 1966. The responses are based on the entire 1012

Table 38. Number of semesters attended at four year schools by students enrolled in 16 Iowa community colleges in 1966

Community college	N	Mean	Std. Deviation
Boone	21	3.76	1.95
Burlington	39	4.38	1.86
Centerville	37	4.78	2.00
Clarinda	37	4.35	2.02
Clinton	39	3.88	1.87
Eagle Grove	16	4.19	2.14
Ellsworth (Iowa Falls)	50	4.12	1.85
Emmettsburg	5	5.20	1.48
Estherville	42	4.24	2.29
Fort Dodge	65	4.51	1.99
Keokuk	17	5.12	2.12
Marshalltown	49	4.80	1.98
Muscatine	32	3.47	1.61
North Iowa (Mason City)	75	3.91	1.72
Southwestern (Creston)	28	4.36	1.89
Webster City	21	4.00	2.24
Total	573	4.23	

Table 39. What are the future educational plans of students enrolled in one of 16 Iowa community colleges in 1966 who did not complete four years of college

Community college	<u>No response</u>		
	N	N	%
Boone	35	16	45.71
Burlington	92	43	46.74
Centerville	59	32	54.24
Clarinda	52	35	67.31
Clinton	61	34	55.74
Eagle Grove	27	16	59.26
Ellsworth (Iowa Falls)	95	42	44.21
Emmettsburg	7	5	71.43
Estherville	83	40	48.19
Fort Dodge	101	55	54.46
Keokuk	35	16	45.71
Marshalltown	97	51	52.58
Muscatine	57	27	47.37
North Iowa (Mason City)	133	68	51.13
Southwestern (Creston)	47	28	59.57
Webster City	31	18	58.06
Total	1012	526	51.98

<u>Complete comm. college</u>		<u>Complete four year</u>		<u>Uncertain</u>		<u>Given up further plans</u>		<u>Other</u>	
N	%	N	%	N	%	N	%	N	%
1	2.86	7	20.00	5	14.29	6	17.14	-	-
7	7.61	12	13.04	16	17.39	11	11.96	3	3.26
2	3.39	10	16.95	7	11.86	4	6.78	4	6.78
4	7.69	6	11.54	6	11.54	1	1.92	-	-
1	1.64	5	8.20	11	18.03	9	14.75	1	1.64
-	-	1	3.70	4	14.81	6	22.22	-	-
2	2.11	11	11.58	20	21.05	13	13.68	7	7.37
-	-	1	14.29	1	14.29	-	-	-	-
3	3.61	10	12.05	15	18.07	11	13.25	4	4.81
7	6.93	7	6.93	17	16.83	10	9.90	5	4.95
7	20.00	-	-	5	14.29	6	17.14	1	2.86
2	2.06	8	8.25	17	17.53	18	18.56	1	1.03
1	1.75	2	3.51	12	21.05	14	24.56	1	1.75
4	3.01	16	12.03	22	16.54	21	15.79	2	1.50
2	4.26	1	2.13	7	14.89	8	17.02	1	2.13
1	3.23	1	3.23	7	22.58	4	12.90	-	-
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
44	4.35	98	9.68	172	16.99	142	14.03	30	2.97

students returning the Former Student Information Form. The first category "No response" is a combination of those students who have graduated, are still attending school or chose not to respond to the item. The item in the questionnaire was specifically pointed to those who had not transferred to a four-year college or university following enrollment at community college. This group accounted for over one-half of the responses (51.98 percent). Only one community college, Keokuk (n=35), exceeded 10 percent of the total sample in students indicating an intention to complete community college. Twenty percent of the students enrolled at Keokuk in 1966 indicated a desire to complete community college. Of the total sample (n=1012) under 5 percent (4.35) indicated intentions of returning to complete community college. Nearly 10 percent (9.68) of the total sample (n=1012) indicated they were considering returning to a four-year college or university and completing four-year degrees at some time in the future. This ranged from a high of 16.95 percent at Centerville Community College (n=59) to a low of no students indicating this choice at Keokuk Community (n=35) and 2.13 percent at Southwestern Community College at Creston (n=47). Of the total sample, 172 or 16.99 percent indicated they were uncertain regarding future education plans. At Webster City Community College (n=31), 22.58 percent of the sample indicated uncertainty about future educational plans at the high end of the range to a low of 11.54 percent of the students from Clarinda Community College (n=52) indicating uncertainty about future plans. Of the total sample (n=1012) 142 or 14.03 percent have decided to give up further plans for education. This

ranged from a high of 24.56 percent indicating this choice at Muscatine Community College (n=57) to a low of no students selecting this choice at Emmetsburg Community College (n=7) and 1.92 percent at Clarinda Community College (n=52). Other choices were indicated by under three percent (2.97) of the total sample. It should be noted that if the no response category is eliminated from consideration over 60 percent (64.60) of the students selected one of the categories that would indicate they are still considering more education of some type while approximately 30 percent (29.23) have definitely given up the idea of further education.

Table 40a and b indicate present occupational status of the first-time, full-time Arts and Science students enrolled in one of the 16 Iowa community colleges in 1966. Former students in the sample were asked to indicate their present occupation. These were assigned to one of the 13 categories found in Tables 36a and b. Over one-third (33.72) of the former students responding to the questionnaire indicated they were either still considered as students as their primary job or were members of the armed services. Student status was indicated by one-third of former students from Eagle Grove Community College (n=27) at the high end of the range to a low of 5.71 percent at Boone Community College (n=35). Nearly one-fifth (18.03 percent) of the students from Clinton Community College (n=61) indicated they were associated with the armed services as a primary occupation while no students from Emmetsburg Community College (n=7) and only 6.52 percent at Burlington Community College (n=92) selected this choice. The only other category which

Table 40a. Present occupation of first-time, full-time students in 16 Iowa community colleges in the fall of 1966

Community college	No response		Operative		Clerical		Profes-sional		Craftsman		Service	
	N	%	N	%	N	%	N	%	N	%	N	%
Boone	35	-	2	5.71	4	11.43	4	11.43	3	8.57	4	11.43
Burlington	92	1.09			13	14.13	12	13.04	6	6.52	1	1.09
Centerville	59	3.39	1	1.69	3	5.08	9	15.25	1	1.69	2	3.39
Clarinda	52	-	1	1.92	5	9.62	12	23.08	3	5.77	1	1.92
Clinton	61	1.64			6	9.84	9	14.75	4	6.56	4	6.56
Eagle Grove	27	-	-	-	2	7.41	3	11.11	1	3.70	1	3.70
Ellsworth (Iowa Falls)	95	-	-	-	7	7.37	11	11.58	4	4.21	5	5.26
Emmettsburg	7	-	-	-	1	14.29	2	28.57	-	-	-	-
Estherville	83	-	-	-	7	8.43	9	10.84	2	2.41	8	9.64
Fort Dodge	101	-	-	-	9	8.91	20	19.80	1	.99	3	2.97

Keokuk	35	-	-	1	2.86	3	8.57	7	20.00	1	2.86	2	5.71
Marshalltown	97	-	-	3	3.09	8	8.25	20	20.62	6	6.19	2	2.06
Muscatine	57	-	-	3	5.26	6	10.53	4	8.77	1	1.75	2	3.51
North Iowa (Mason City)	133	2	1.50	4	3.01	5	3.76	24	18.05	9	6.77	3	2.26
Southwestern (Greston)	47	-	-	1	2.13	2	4.26	11	23.40	4	8.51	-	-
Webster City	31	-	-	-	-	4	12.90	2	6.45	2	6.45	-	-
Total		6	.59	16	1.58	82	8.40	160	15.81	48	4.74	38	3.75

Table 40b. Present occupation of first-time, full-time students in 16 Iowa community colleges in the fall of 1966

Community college	<u>Managers</u>		<u>Sales</u>		<u>Nonfarm labor</u>	
	N	%	N	%	N	%
Boone	4	11.43	-	-	3	8.57
Burlington	9	9.78	3	3.26	7	7.61
Centerville	4	6.78	2	3.39	6	10.17
Clarinda	1	1.92	3	5.77	2	3.85
Clinton	4	6.56	1	1.64	4	6.56
Eagle Grove	2	7.41	-	-	2	7.41
Ellsworth (Iowa Falls)	8	8.42	4	4.21	7	7.37
Emmettsburg	1	14.29	-	-	1	14.29
Estherville	5	6.02	1	1.20	6	7.23
Fort Dodge	12	11.88	2	1.98	7	6.93
Keokuk	2	5.71	1	2.86	4	11.43
Marshalltown	5	5.15	7	7.22	1	1.03
Muscatine	4	7.02	2	3.51	2	3.51
North Iowa (Mason City)	9	6.77	6	4.51	7	5.26
Southwestern (Creston)	1	2.13	2	4.26	1	2.13
Webster City	1	3.23	3	9.68	1	3.23
Total	72	7.11	37	3.65	61	6.03

<u>Farm</u>		<u>Unemployed</u>		<u>Housewife</u>		<u>Armed services</u>		<u>Student</u>	
N	%	N	%	N	%	N	%	N	%
2	5.71	1	2.86	2	5.71	4	11.43	2	5.71
1	1.09	4	4.35	8	8.70	6	6.52	21	22.83
2	3.39	3	5.08	5	8.47	5	8.47	14	23.73
1	1.92	1	1.92	2	3.85	8	15.38	12	23.08
-	-	2	3.28	-	-	11	18.03	15	24.59
-	-	2	7.41	3	11.11	2	7.41	9	33.33
2	2.11	2	2.11	7	7.37	16	16.84	22	23.16
1	14.29	-	-	-	-	-	-	1	14.29
4	4.82	4	4.82	6	7.23	13	15.66	18	21.69
3	2.97	4	3.96	5	4.95	15	14.85	20	19.80
1	2.86	2	5.71	3	8.57	4	11.43	4	11.43
4	4.12	5	5.15	13	13.40	10	10.31	13	13.40
2	3.51	2	3.51	5	8.77	9	15.79	14	24.56
1	.75	9	6.77	9	6.77	18	13.53	27	20.30
4	8.51	2	4.26	4	8.51	7	14.89	8	17.02
1	3.23	2	6.45	2	6.45	4	12.90	9	29.03
29	2.86	45	4.45	74	7.31	132	13.04	209	20.68

exceeded 10 percent of those returning questionnaires was the professional category where 15.81 percent of the students indicate occupations which were categorized as professional. This ranged from a high of 28.57 percent at Emmetsburg Community College (n=7) and 23.40 percent at Southwestern Community College at Creston (n=47) to a low of 6.45 percent at Webster City Community College (n=31) and 8.77 percent at Muscatine Community College (n=51). Clerical categories accounted for over 10 percent of former students at five of the 16 community colleges, namely, Boone Community College (n=35) 11.43 percent, Burlington Community College (n=92) 14.13 percent, Emmetsburg Community College (n=7) 14.29 percent, Webster City Community College (n=31) 12.90 percent and Muscatine Community College (n=51) 10.53 percent. The mean value for the 16 community colleges was 8.40 percent indicating occupations in the clerical category. Other categories were indicated by rather small numbers of former students. It should be noted that of the total sample (n=1012) only 4.45 percent indicated unemployment.

Present salary range of first-time, full-time Arts and Science students who entered one of 16 Iowa community colleges in 1966 is shown in Table 41. Of the 1012 students returning questionnaires 375 or 37.05 percent chose not to respond to the item either considering it confidential or were not employed full-time and therefore not applicable. Of those responding, three categories accounted for the largest number of responses. Over 80 percent of those responding to this item (81.63) indicated one of three categories. The category of \$2500 to

Table 41. Present salary range of first-time, full-time, Arts and Science students in 16 Iowa community colleges in 1966

Community college	<u>No response</u>			<u>Less than 2499</u>		<u>2500-4999</u>	
	N	N	%	N	%	N	%
Boone	35	8	22.86	-	-	8	22.86
Burlington	92	33	35.87	4	4.35	13	14.13
Centerville	59	27	45.76	4	6.78	10	16.95
Clarinda	52	16	30.77	-	-	12	23.08
Clinton	61	21	34.43	4	6.56	12	19.67
Eagle Grove	27	15	55.56	1	3.70	1	3.70
Ellsworth (Iowa Falls)	95	32	33.68	12	12.63	16	16.84
Emmettsburg	7	2	28.57	-	-	1	14.29
Estherville	83	31	37.35	4	4.82	18	21.69
Fort Dodge	101	39	38.61	4	3.96	11	10.89
Keokuk	35	11	31.43	2	5.71	6	17.14
Marshalltown	97	34	35.05	6	6.19	10	10.31
Muscatine	57	25	43.86	3	5.26	9	15.79
North Iowa (Mason City)	133	52	39.10	9	6.77	19	14.29
Southwestern (Creston)	47	16	34.04	4	8.51	4	8.51
Webster City	31	13	41.94	1	3.23	6	19.35
Total	1012	375	37.05	58	5.73	156	15.42

<u>5000-7499</u>		<u>7500-9999</u>		<u>10000-12499</u>		<u>12500-14999</u>		<u>Over 15000</u>	
N	%	N	%	N	%	N	%	N	%
9	25.71	8	22.86	2	5.71	-	-	-	-
24	26.09	10	10.87	5	5.43	1	1.09	2	2.17
11	18.64	5	8.47	2	3.39	-	-	-	-
14	26.92	7	13.46	2	3.85	-	-	1	1.92
13	21.31	7	11.48	4	6.56	-	-	-	-
8	29.63	2	7.41	-	-	-	-	-	-
20	21.05	12	12.63	3	3.16	-	-	-	-
3	42.86	-	-	1	14.29	-	-	-	-
15	18.07	12	14.46	1	1.20	2	2.41	-	-
20	19.80	16	15.84	7	6.93	3	2.97	1	.99
11	31.43	5	14.29	-	-	-	-	-	-
23	23.71	17	17.53	4	4.12	1	1.03	2	2.06
7	12.28	11	19.30	2	3.51	-	-	-	-
28	21.05	19	14.29	4	3.01	1	.75	1	.75
10	21.28	8	17.02	3	6.38	2	4.26	-	-
3	9.68	6	19.35	2	6.45	-	-	-	-
219	21.64	145	14.33	42	4.15	10	.90	7	.70

\$4999 annual income was indicated by approximately one-fourth of the students (24.49 percent). The next category of \$5000 to \$7499 was selected by 34.38 percent of those responding to the item and 22.76 percent responded to the category \$7500 to \$9999 annual income. The four other categories accounted for only 18.35 percent of those responding and only 11.56 percent of the total sample.

Information relative to longevity of former students on their present job is shown in Table 42. Approximately 40 percent (41.50) of the sample (n=1012) indicated they had been employed in their present position less than 12 months. Over one-half (55.93 percent) of the students from Centerville Community College (n=59) indicated they had been employed less than 12 months and 71.43 percent at Emmettsburg Community College indicated employment of less than 12 months while 27.66 percent of students responding from Southwestern Community College at Creston (n=47) indicated employment of less than 12 months. The category of 12 to 23 months was selected by 14.53 percent of the total sample (n=1012) with a range of 6.78 percent at Boone Community College (n=35). Twenty-four to 35 months on present job was selected by a high of 20.48 percent of the students at Estherville Community College (n=83) to a low of no students at Emmettsburg Community College (n=7) and 5.08 percent at Centerville Community College (n=59) with a mean value for the 1012 students responding of 10.47 percent. The category of 36 to 47 months was selected by 7.21 percent of the total sample (n=1012) with students from two schools, Boone Community College (n=35) and Southwestern Community College at Creston (n=47) reporting over 10 percent in this

Table 42. Longevity on present job by first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966

Community college	<u>No response</u>			<u>Less than 12 months</u>	
	N	N	%	N	%
Boone	35	3	8.57	14	40.00
Burlington	92	16	17.39	43	46.24
Centerville	59	15	25.42	33	55.93
Clarinda	52	12	23.08	22	42.31
Clinton	61	16	26.23	24	39.34
Eagle Grove	27	9	33.33	9	33.33
Ellsworth (Iowa Falls)	95	17	17.89	40	42.11
Emmettsburg	7	1	14.29	5	71.43
Estherville	83	19	22.89	27	32.53
Fort Dodge	101	24	23.76	45	44.55
Keokuk	35	4	11.43	14	40.00
Marshalltown	97	14	14.43	39	40.21
Muscatine	57	17	29.82	23	40.35
North Iowa (Mason City)	133	28	21.05	55	41.35
Southwestern (Creston)	47	13	27.66	13	27.66
Webster City	31	7	22.58	14	45.16
Total	<u>1012</u>	<u>215</u>	<u>21.24</u>	<u>420</u>	<u>41.50</u>

<u>12-23 Months</u>		<u>24-35 Months</u>		<u>36-47 Months</u>		<u>Over 48 months</u>	
N	%	N	%	N	%	N	%
10	28.57	2	5.71	4	11.43	2	5.71
13	14.13	11	11.96	6	6.52	3	3.26
4	6.78	3	5.08	3	5.08	1	1.69
6	11.54	4	7.69	5	9.62	3	5.77
10	16.39	5	8.20	2	3.28	4	6.56
3	11.11	2	7.41	2	7.41	2	7.41
17	17.89	12	12.63	5	5.26	4	4.21
1	14.29	-	-	-	-	-	-
13	15.66	17	20.48	7	8.43	-	-
12	11.88	7	6.93	7	6.93	6	5.94
5	14.29	3	8.57	3	8.57	6	17.14
14	14.43	11	11.34	9	9.28	10	10.31
6	10.53	6	10.53	2	3.51	3	5.21
20	15.04	14	10.53	12	9.02	4	3.01
9	19.15	5	10.64	5	10.64	2	4.26
4	12.90	4	12.90	1	3.23	1	3.23
<u>147</u>	<u>14.53</u>	<u>106</u>	<u>10.47</u>	<u>73</u>	<u>7.21</u>	<u>51</u>	<u>5.05</u>

category (11.43 and 10.64 percent respectively) and low values of under four percent at Clinton Community College (n=61), 3.28 percent, Emmetsburg (n=7) none indicated, Webster City Community College (n=31) 3.23 percent and Muscatine Community College (n=57) 3.51 percent. Fifty-one students (5.05 percent) of the total sample (n=1012) indicated they had been employed in their present job for over 48 months with 17.14 percent at Keokuk Community College (n=35) indicating this length of employment and two schools, Emmetsburg Community College (n=7) and Estherville Community College (n=83) indicating no responses in this category.

Section E

Reactions of first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966 toward their community college experience

Reactions of former Arts and Science students to the difficulty of course work at the community college is indicated in Table 43. Only 14 students of the total questionnaires returned (n=1012) or 1.38 percent felt the coursework at the community college was too difficult and demanding. Nearly one-half (seven) of the schools had no students indicate this as a choice on the questionnaire. Only Webster City Community College (n=31) had greater than five percent (6.45 percent) of the students indicate this as a choice. The vast majority of students (90.01 percent) felt the community college instruction was adequate. This

Table 43. Reaction of first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966 to difficulty of coursework in community college

Community college co	N	No response		Too difficult and demanding		Adequate		Too easy	
		N	%	N	%	N	%	N	%
Boone	35	-	-	-	-	32	91.43	3	8.57
Burlington	92	1	1.09	3	3.26	83	90.22	5	5.43
Centerville	59	1	1.69	1	1.69	52	88.14	5	8.47
Clarinda	52	-	-	1	1.92	47	90.38	4	7.69
Clinton	61	1	1.64	-	-	51	83.61	-	-
Eagle Grove	27	-	-	-	-	21	77.78	6	22.22
Ellsworth (Iowa Falls)	95	1	1.05	-	-	91	95.79	3	3.16
Emmettsburg	7	-	-	-	-	7	100.00	-	-
Estherville	83	3	3.61	1	1.20	76	91.57	3	3.61
Fort Dodge	101	-	-	2	1.98	89	88.12	10	9.90
Keokuk	35	-	-	-	-	32	91.43	3	8.57
Marshalltown	97	-	-	1	1.03	86	88.66	10	10.31
North Iowa (Mason City)	133	1	.75	2	1.50	122	91.73	8	6.02
Southwestern (Creston)	47	-	-	-	-	44	93.62	3	6.38
Webster City	31	-	-	2	6.45	26	83.87	3	9.68
Total		8	.80	14	1.38	911	90.01	79	7.81

ranged from 100 percent indicating this choice at Emmetsburg Community College (n=7) to a low of 77.78 percent at Eagle Grove Community College (n=27). Those who felt community college course work was too easy accounted for 7.81 percent of the total sample (n=1012) with a range of no students indicating this choice at Emmetsburg Community College (n=7) and 3.16 percent of the students from Ellsworth Community College (n=95) to a high of 22.22 percent of the students from Eagle Grove Community College (n=27).

Reactions to instruction in the community college are shown in Table 44. Approximately 15 percent (n=15.81) of those returning questionnaires indicated they felt that they received excellent instruction while attending the community colleges. This ranged from a high of 34.29 percent at Boone Community College (n=35) to a low of 9.47 percent at Ellsworth Community College (n=95). Of the total sample (n=1012), 62.75 percent of the students indicated they would consider their instruction "good" while attending community college with a range from a high of 78.35 percent of the students at Marshalltown Community College (n=97) considering instruction "good" and a low of 49.18 percent at Clinton Community College (n=61) indicating this response. Fair instruction was indicated by 190 or 18.77 percent of the total sample (n=1012). This category accounted for a high of 31.15 percent at Clinton Community College (n=61) to a low of 7.69 percent at Clarinda Community College (n=52). Eight of the 16 community colleges had no former students who felt instruction was poor. Of the total sample (n=1012) only 15 or 1.48 percent reported instruction was poor with a high value of 5.77 percent

Table 44. Reactions of first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966 to the quality of instruction received

Community college	<u>No response</u>			<u>Excellent</u>		<u>Good</u>		<u>Fair</u>		<u>Poor</u>	
	N	N	%	N	%	N	%	N	%	N	%
Boone	35	-	-	12	34.29	18	51.43	5	14.29	-	-
Burlington	92	1	1.09	10	10.87	62	67.39	16	17.39	3	3.26
Centerville	59	1	1.69	6	10.17	34	57.63	17	28.81	1	1.69
Clarinda	52	-	-	12	23.08	33	63.46	4	7.69	3	5.77
Clinton	61	1	1.64	10	16.39	30	49.18	19	31.15	1	1.64
Eagle Grove	27	-	-	5	18.52	15	55.56	7	25.93	-	-
Ellsworth (Iowa Falls)	95	1	1.05	9	9.47	59	62.11	24	25.26	2	2.11
Emmettsburg	7	-	-	1	14.29	5	71.43	1	14.43	-	-
Estherville	83	3	3.61	17	20.43	56	67.47	7	8.43	-	-
Fort Dodge	101	1	.99	14	13.86	64	63.37	21	20.79	1	.99

Keokuk	35	-	-	5	14.29	21	60.00	9	25.71	-	-
Marshalltown	97	-	-	10	10.31	76	78.35	11	11.34	-	-
Muscatine	57	-	-	8	14.04	36	63.16	13	22.81	-	-
North Iowa (Mason City)	133	2	1.50	25	18.80	79	59.40	24	18.05	3	2.26
Southwestern (Creston)	47	1	2.13	9	19.15	28	59.57	8	17.02	1	2.13
Webster City	31	1	3.23	7	22.58	19	61.29	4	12.90	-	-
		—	—	—	—	—	—	—	—	—	—
Total		12	1.19	160	15.81	635	62.75	190	18.77	15	1.48

at Clarinda Community College (n=52) indicating this response.

Table 45a and b indicate reasons former students chose to leave the community college. Nearly one-half (48.41 percent) of the students (n=1012) responding to the questionnaire indicated they terminated enrollment at the community college because they completed the program at the community college. This reason accounted for 61.02 percent of the students who left Centerville Community College (n=59) and a low of 28.57 percent at Emmettsburg Community College (n=7) and 36.63 percent at Fort Dodge Community College (N=101). Dissatisfaction with community college accounted for 72 or 7.11 percent of the total sample (n=1012). Webster City Community College (n=31) and Emmettsburg Community College (n=7) had no students indicating dissatisfaction with college as a reason for leaving while three schools exceeded 10 percent in this category, Centerville Community College (n=59) 10.17 percent, Estherville Community College (n=83) 10.84 percent, and North Iowa Area Community College at Mason City, (n=133) 11.28 percent. Financial reasons were indicated by 55 students or 5.43 percent of the total sample. Only one school exceeded 10 percent of their former students indicating this as a reason for leaving. Keokuk Community College (n=35) had 11.43 percent of their former students indicate financial problems as their reason for leaving the community college. Draft was indicated by 6.42 percent of the sample (n=1012) as the reason for terminating enrollment at the community college. Three schools, Boone Community College (n=35), Emmettsburg Community College (n=7) and Muscatine Community College (n=57)

Table 45a. Indicated reason for leaving the community college by first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges in 1966

Community college	N	<u>No response</u>		<u>Other</u>	
		N	%	N	%
Boone	35	-	-	-	-
Burlington	92	1	1.09	2	2.17
Centerville	59	2	3.39	-	-
Clarinda	52	1	1.92	1	1.92
Clinton	61	2	3.28	-	-
Eagle Grove	27	-	-	-	-
Ellsworth (Iowa Falls)	95	2	2.11	1	1.05
Emmettsburg	7	-	-	-	-
Estherville	83	2	2.41	-	-
Fort Dodge	101	1	.99	-	-
Keokuk	35	1	2.86	-	-
Marshalltown	97	-	-	-	-
Muscatine	57	-	-	-	-
North Iowa (Mason City)	133	1	.75	-	-
Southwestern (Creston)	47	1	2.13	-	-
Webster City	31	-	-	-	-
		—	—	—	
Total		18	1.78	4	

<u>Completed program</u>		<u>Dis-satisfaction with college</u>		<u>Financial reasons</u>		<u>Draft</u>		<u>Health</u>	
<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
18	51.43	1	2.86	1	2.86	5	14.29	1	2.86
41	44.57	9	9.78	5	5.43	8	8.70	2	2.17
36	61.02	6	10.17	3	5.08	3	5.08	1	1.69
20	38.46	5	9.62	4	7.69	-	-	-	-
31	50.82	6	9.84	2	3.28	2	3.28	-	-
17	62.96	1	3.70	1	3.70	-	-	-	-
54	56.84	6	6.32	2	2.11	4	4.21	1	1.05
2	28.57	-	-	-	-	1	14.29	-	-
41	49.40	9	10.84	6	7.23	6	7.23	1	1.20
37	36.63	5	4.95	5	4.95	7	6.93	2	1.98
16	45.71	1	2.86	4	11.43	2	5.71	-	-
40	41.24	3	3.09	6	6.19	7	7.22	3	3.09
33	57.89	2	3.51	4	7.02	7	12.28	-	-
61	45.86	15	11.28	7	5.26	12	9.02	1	.75
25	53.19	3	6.38	2	4.26	1	2.13	2	4.26
18	58.06	-	-	3	9.86	-	-	-	-
490	48.41	72	7.11	55	5.43	65	6.42	14	1.38

Table 45b. Indicated reason for leaving the community college by first-time, full-time, Arts and Science students enrolled in 16 Iowa community colleges .

Community college	Work		Lack of time	
	N	%	N	%
Boone	3	8.57	-	-
Burlington	5	5.43	2	2.17
Centerville	1	1.69	1	1.69
Clarinda	4	7.69	-	-
Clinton	-	-	2	3.28
Eagle Grove	1	3.70	-	-
Ellsworth (Iowa Falls)	5	5.26	-	-
Emmettsburg	1	14.29	-	-
Estherville	3	3.61	1	1.20
Fort Dodge	5	4.95	3	2.97
Keokuk	2	5.71	-	-
Marshalltown	7	7.22	2	2.06
Muscatine	1	1.75	1	1.75
North Iowa (Mason City)	9	6.77	4	3.01
Southwestern (Creston)	-	-	1	2.13
Webster City	1	3.23	2	6.45
Total	48	4.74	19	1.88

<u>Inability to get desired classes</u>		<u>Transfer</u>		<u>Poor counseling</u>		<u>Poor teaching</u>		<u>Limited curriculum</u>	
<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
1	2.86	5	14.29	-	-	-	-	-	-
4	4.35	10	10.87	1	1.09	2	2.17	-	-
-	-	4	6.78	-	-	1	1.69	1	1.69
-	-	16	30.77	1	1.92	-	-	-	-
6	9.84	10	16.39	-	-	-	-	-	-
-	-	5	18.52	1	3.70	-	-	1	3.70
3	3.16	17	17.89	-	-	-	-	-	-
-	-	3	42.86	-	-	-	-	-	-
1	1.20	12	14.41	1	1.20	-	-	-	-
5	4.95	29	28.71	-	-	1	.99	1	.99
2	5.71	7	20.00	-	-	-	-	-	-
3	3.09	22	22.68	-	-	-	-	4	4.12
-	-	7	12.28	-	-	1	1.75	1	1.75
2	1.50	20	15.04	-	-	-	-	1	.75
2	4.26	9	19.15	-	-	1	2.13	=	=
1	3.23	4	12.90	-	-	-	-	2	6.45
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
30	2.96	180	17.79	4	.39	6	.59	11	1.12

had greater than 10 percent of their former students indicating draft as a reason for leaving. Fourteen students, accounting for 1.38 percent of the total sample, dropped community college for health reasons. All schools had less than five percent of their students in this category. Forty-eight or 4.74 percent of the total sample indicated work as a reason for leaving community college. Only one school, Emmettsburg Community College (n=7) exceeded 10 percent in this category and the small number available should be noted. Lack of time accounted for only 19 or 1.88 percent of the total sample (n=1012). Inability to obtain the desired classes was the reason given by 30 students or 2.96 percent of the total sample as the reason for leaving community college. Again none of the 16 schools exceeded 10 percent in this category. Transfer to another institution accounted for 180 or 17.79 percent of the total sample (n=1012). Range was from a high of 42.86 percent at Emmettsburg Community College (n=7) to a low of 6.78 percent at Centerville Community College (n=59). Other responses including poor counseling, poor teachers and limited curriculum accounted for few responses as a reason for leaving the community college.

The overall value of the community college as viewed by former students who entered in 1966 is shown in Table 46. The largest response was in the category of extremely helpful where nearly one-third (29.35) of the total sample (n=1012) felt they had gained considerably from the community college. The responses varied from a low of 22.86 percent at Keokuk Community College (n=35) indicating this response to a high

Table 46. Overall value of community college education as indicated by first-time, full-time, Arts and Science students enrolling in 16 Iowa community colleges in 1966

Community college	N	<u>No response</u>		<u>Extremely helpful</u>		<u>Moderately helpful</u>		<u>Helpful</u>		<u>Little help</u>		<u>No help</u>	
		N	%	N	%	N	%	N	%	N	%	N	%
Boone	35	1	2.86	13	37.14	10	28.57	5	14.27	4	11.43	2	5.71
Burlington	92	4	4.35	24	26.09	22	23.91	34	36.96	4	4.35	4	4.35
Centerville	59	2	3.39	15	25.42	17	28.81	16	27.12	7	11.86	2	3.39
Clarinda	52	1	1.92	18	34.62	19	36.54	6	11.54	5	9.62	3	5.77
Clinton	61	1	1.64	17	27.87	14	22.95	22	36.07	6	9.84	1	1.64
Eagle Grove	27	2	7.41	9	33.33	6	22.22	5	18.52	3	11.11	2	7.41
Ellsworth (Iowa Falls)	95	2	2.11	28	29.47	27	28.42	23	24.21	11	11.58	4	4.21
Emmettsburg	7	-	-	2	28.57	3	42.86	1	14.29	1	14.29	-	-
Estherville	83	4	4.82	19	22.89	30	36.14	19	22.89	7	8.43	4	4.82
Fort Dodge	101	3	2.97	30	29.70	30	29.70	24	23.76	13	12.87	1	.99

Keokuk	35	-	-	8	22.86	10	28.57	12	34.29	5	14.29	-	-
Marshalltown	97	1	1.03	36	37.11	28	28.87	19	19.59	10	10.31	3	3.09
Muscatine	57	1	1.75	16	28.07	13	22.81	13	22.81	7	12.28	7	12.28
North Iowa (Mason City)	133	5	3.76	40	30.08	33	24.81	32	24.06	18	13.53	5	3.76
Southwestern (Greston)	47	3	6.38	12	25.53	14	29.79	15	31.91	2	4.26	1	2.13
Webster City	31	3	9.68	10	32.26	4	12.90	8	25.81	5	16.13	1	3.23
Total		33	3.26	297	29.35	280	27.67	254	25.10	108	10.67	40	3.95

of 37.14 percent of those responding from Boone Community College (n=35) selecting the response. Moderately helpful was selected by 280 or 27.67 percent of the total sample (n=1012) with a high of 42.86 percent from Emmetsburg Community College (n=7) selecting this response to a low of 12.90 percent at Webster City Community College (n=31) selecting the response. The "helpful" category was selected by slightly over one-fourth (25.10 percent) of the total sample (n=1012) with a range of 11.54 percent at Clarinda Community College (n=52) to a high of 36.96 percent at Burlington Community College (n=92). "Little help" was selected by 108 or 10.67 percent of the total sample (n=1012) with a low of 4.26 percent at Southwestern Community College at Creston (n=47) to a high of 16.13 percent selecting the response at Webster City Community College (n=31). Under five percent (3.95) of the sample (n=1012) felt community college was of no help. Only in one school, Muscatine Community College (n=57) did greater than 10 percent of the former students indicate the no help category as their reaction to the value of community college.

Section F

Analysis of descriptions of students entering as first-time, full-time Arts and Science students in one of 16 Iowa community colleges in 1966.

The data in Section F provides for comparisons of various characteristics across the 16 Iowa community colleges involved in the study. Comparisons were based on two statistical techniques. Characteristics involving attribute variables were analyzed through the use of chi-square techniques. Continuous variables were analyzed through the use of one-way analysis of variance for each characteristic. Data for both chi-square and the analysis of variance included all responses to a particular variable.

Comparison one: How similar are the student populations of the 16 public community colleges in Iowa based on entering first-time, full-time students in 1966?

Null hypothesis one: There are no significant differences between the student bodies of the 16 Iowa community colleges in terms of the following variables:

1. High school rank
2. High school class size
3. ACT English
4. ACT Math
5. ACT Social Studies
6. ACT Natural Science
7. ACT Composite
8. Age
9. Sex
10. Educational level of mother
11. Educational level of father
12. Commuting distance to college
13. Distance from home

14. Marital status while in school
15. Factors influencing attendance
16. Employment prior to community college attendance.

Variables one through seven in null hypothesis one were analyzed using analysis of variance techniques and variables eight through 14 were analyzed using chi-square as a means of testing the hypothesis.

Tables 47 through 53 provide analysis of variance data for

Table 47. Analysis of variance for high school class rank

Source	D.F.	Sum of square	Mean square
Between schools	14	2.017	.144
Within schools	1513	93.827	.062
		$F = \frac{.144}{.062} = 2.32^*$	$F_{(14, \infty)}(.01) = 2.07$

*Significant at .01 level.

Table 48. Analysis of variance for high school class size

Source	D.F.	Sum of square	Mean square
Between schools	14	3370124.999	24073.214
Within schools	1513	42976751.947	28404.991
		$F = \frac{24073.214}{28404.991} = 8.47^*$	$F_{(14, \infty)}(.01) = 2.07$

*Significant at .01 level.

Table 49. Analysis of variance for American College Test - English

Source	D.F.	Sum of square	Mean square
Between schools	15	615.004	41.000
Within schools	1542	31583.589	20.482
		$F = \frac{41.000}{20.482} = 2.002^*$	$F_{(15, \infty)}(.05) = 1.67$

*Significant at .05 level.

Table 50. Analysis of variance for American College Test - Mathematics

Source	D.F.	Sum of square	Mean square
Between schools	15	935.592	62.373
Within schools	1541	53813.985	34.921
		$F = \frac{62.373}{34.921} = 1.79^*$	$F_{(15, \infty)}(.05) = 1.67$

*Significant at .05 level.

Table 51. Analysis of variance for American College Tests - Social Science

Source	D.F.	Sum of square	Mean square
Between schools	15	873.763	58.251
Within schools	1540	48322.738	31.398
		$F = \frac{54.610}{31.398} = 1.85^*$	$F_{(15, \infty)}(.05) = 1.67$

*Significant at .05 level.

Table 52. Analysis of variance for American College Tests - Natural Science

Source	D.F.	Sum of square	Mean square
Between schools	15	999.409	66.627
Within schools	1540	44666.248	29.004
		$F = \frac{62.463}{29.022} = 2.30^*$	$F_{(15, \infty)}(.01) = 2.03$

*Significant at .01 level.

Table 53. Analysis of variance for American College Tests - Composite.

Source	D.F.	Sum of square	Mean square
Between schools	15	647.125	43.142
Within schools	1540	29615.674	19.230
		$F = \frac{40.445}{19.243} = 2.24^*$	$F = (15, \infty) (.01) = 2.03$

*Significant at .01 level.

variables one through seven. Four of the variables were significant at the .01 level. High school class rank ($F=2.32$), high school class size ($F=8.47$), American College Test - Natural Science ($F= 2.30$), and American College Test - Composite ($F=2.24$) were included in this grouping. American College Test - English ($F=2.00$), American College Test - Mathematics ($F=1.79$) and American College Test - Social Science ($F=1.74$) were significant at the .05 level.

Table 54 provides data, analyzed through the use of chi-square, on variables eight through 16. Four of the variables, commuting distance to college ($\chi^2=216.16$), distance from home ($\chi^2=200.63$) and marital status ($\chi^2=37.56$) were significant at the .005 level. Two of the variables, educational level of mother ($\chi^2=98.70$) and age ($\chi^2=376.12$) were significant at the .05 level. Sex ($\chi^2=28.26$) was significant at the .025 level. Factors influencing attendance ($\chi^2=197.72$) was significant at the .01 level. The chi-square value of 80.86 for educational

Table 54. Chi-square results of attribute data of student bodies of the 16 Iowa community colleges

Variables	N	D.F.	χ^2
8. Age	992	315	376.12***
9. Sex	1725	15	28.26**
10. Educational level of father	995	75	80.86
11. Educational level of mother	1005	75	98.70***
12. Commuting distance to college	1002	60	216.16****
13. Distance from home	1006	60	200.63****
14. Marital status	1003	15	37.56****
15. Factors influencing attendance	1003	150	197.72*
16. Years prior employment	857	45	37.95

*Significant at .01 level of confidence.

**Significant at .025 level of confidence.

***Significant at .05 level of confidence.

****Significant at .005 level of confidence.

level of father was not great enough to be significant as was the chi-square value of 37.95 for years prior employment.

Conclusion: The null hypothesis of no significant difference on the 16 variables indicated was rejected on 14 of the variables. There are statistically significant differences in the student bodies of the 16 Iowa community colleges on these variables. Only in cases

of educational level of father and years prior employment did the null hypothesis remain tenable after analysis by chi-square.

The five indicators of academic achievement, high school class rank and the five American College Tests all indicated significant differences between the community colleges.

The differences between the high and low scores indicated in Table 55 should be noted. The mean value for students attending

Table 55. Range and means of indicators of academic variables - by community college

Variable	High		Low		Mean
	School	S.S	School	S.S	
H.S. Class					
rank	Marshalltown C.C.	44.27	Clarinda C.C.	67.27	53.72
ACT English	Marshalltown C.C.	20.13	Boone C.C.	17.33	18.87
Math	Marshalltown C.C.	21.45	Emmettsburg C.C.	18.18	19.94
S.S.	Marshalltown C.C.	21.73	Muscatine C.C.	19.24	20.93
N.S.	Marshalltown C.C.	22.23	Clarinda C.C.	19.49	20.73
Comp.	Marshalltown C.C.	21.50	Clarinda C.C.	19.17	20.09

Clarinda Community College (67.27) indicates a student body below the mean value for all graduating high school students. While at Marshalltown Community College, the mean value (44.27) indicates a student body slightly above the mean value for all high school students.

In the 15 community colleges on which data was available, five community colleges had a mean relative class rank for their student

bodies in the 40-50 range indicating the mean in the upper one-half of the high school graduating class. These included: Burlington Community College (48.90), Keokuk Community College (47.85), Marshalltown Community College (44.27), Southwestern Community College (49.82), and Webster City Community College (49.65). Six were in the range of 50-60. These included: Boone Community College (55.77), Clinton Community College (51.23), Eagle Grove Community College (50.37), Fort Dodge Community College (50.95), Muscatine Community College (56.06), and North Iowa Area Community College (54.20). Four community colleges had mean relative class ranks of above 60 indicating a value below the middle of the high school graduating class. These included: Centerville Community College (60.08), Clarinda Community College (67.27), Ellsworth Community College (64.74), and Estherville Community College (60.54).

The five American College Test scores present a similar picture. High mean values for all five scores were found at Marshalltown Community College (20.13, 21.45, 21.73, 22.23, and 21.50) with the low mean score in English (17.33) found at Boone Community College, Mathematics (18.18) at Emmetsburg Community College, Social Science (19.24) at Muscatine Community College, and Natural Science (19.49) and Composite (19.17) found at Clarinda Community College.

Based on the composite scores, which represent an average of the four tests, two of the 16 community colleges had mean composite scores above 21. These included: Webster City Community College (21.02) and

Marshalltown Community College (21.50). Four schools were in the 20-21 range. These were: Burlington Community College (20.21), Fort Dodge Community College (20.25), North Iowa Area Community College (20.67), and Southwestern Community College (20.54). The remaining ten community colleges were in the 19-20 range.

The mean values for size of high school graduating classes for 15 of the 16 Iowa community colleges ranged from a low of 113.70 students at Southwestern Community College at Creston to a high of 266.43 students at Burlington Community College. Class size for individuals within schools ranged from a low of seven students at Fort Dodge Community College to a high of 1,255 at Ellsworth Community College. The significant differences appear to be largely associated with size of schools in the immediate area surrounding the community college.

The significant differences that were measured on the basis of age appear to be directly associated with the number of older students served by the community colleges. While the means are within a range of approximately one and one-third years, a range in standard deviation from .49 at Emmetsburg Community College to 4.16 at Eagle Grove Community College. Combining students in the 17-18-19 year age range provides a better picture of the percentage of older students served. Emmetsburg Community College students were all in the 17-18-19 year age range with slightly over three-fourths (77.14) of the students at Boone Community College in this age range.

A rather marked difference based on chi-square in the percentage of enrollment of males and females should be noted. This ranged from

a 60-40 male-female ratio at Burlington Community College to nearly 80-20 (79.41-20.59) male-female ratio at Southwestern Community College at Creston.

Six of the 16 community colleges studied had percentage of male students above 70 with the corresponding percentage of females. These included: Centerville Community College (76.79), Clarinda Community College (78.49), Clinton Community College (75.93), North Iowa Area Community College (72.36), Southwestern Community College (79.41) and Webster City Community College (72.00). The remaining ten schools were in the percentage range of 60-70 with the corresponding percentage of females.

The significance of the differences of mothers educational level can be illustrated by dividing the groupings at high school graduation. Approximately 15 percent of the students from three schools, Centerville Community College (13.55), Eagle Grove Community College (14.81), and Keokuk Community College (14.28) indicated mothers had attended some college, were college graduates or had attended a professional school in contrast to Boone Community College where approximately 40 percent of the students (40.01) indicated this level of education for their mother's. The largest percent of students at all community colleges indicated their mothers had completed high school as the highest level of education. This ranged from a low of 35.09 percent at Muscatine Community College to a high of 64.41 percent at Centerville Community College with a mean value of slightly over 50 percent (52.37)

for the 16 community colleges.

The chi-square measured difference in distance traveled to and from college each day can be shown by the wide ranges that occurred in the categories. A range exists from 8.57 percent indicating the less than one mile category at Keokuk Community College to a high of 76.84 percent at Ellsworth Community College. The next category of one to nine miles has a somewhat reversed effect with a low figure of 7.37 percent at Ellsworth Community College to a high of 44.26 percent at Clinton Community College. The third and fourth categories, 10-19 miles and over 20 miles, show a similar pattern with Ellsworth Community College (3.16) next to lowest in the third category and lowest in the fourth (12.63). The high percentages for the third category are at Eagle Grove Community College (14.81) in category three, with Keokuk Community College (14.29) and Emmetsburg Community College nearly the same and Keokuk Community College (34.29) high in category four.

The significant differences measured by the chi-square for the distance from the students home to the community college he or she attended can be shown by the range of values in the various categories. Local students, those under 20 miles, comprised over 70 percent of the students attending in five of the community colleges. These included: Boone Community College (71.43), Burlington Community College (72.74), Emmetsburg Community College (85.71), Keokuk Community College (80.00), and Webster City Community College (77.42). One community college, Ellsworth, had below 30 percent (22.11) in the under 20 mile range with the remainder of the colleges falling in the 30-70 percent range. The

over 80 mile category shows a similar wide range. With the exception of Ellsworth Community College, where slightly over 30 percent (31.58) of the students reported home being over 80 miles from Ellsworth, under 30 percent of the students from the community colleges reported living over 80 miles from the college attended and three, Clinton Community College, Emmettsburg Community College, and Keokuk Community College, had no students indicating this distance to the community college.

The significant differences in the number of married students can be illustrated by the percent of married students enrolled at the various community colleges. Three community colleges, Eagle Grove, Emmettsburg, and Estherville, had no students in the sample indicating they were married while attending community college while over 10 percent of the students from three community colleges, Marshalltown (13.40), Muscatine (12.28), and Southwestern (19.15), indicated being married while attending with Southwestern Community College at Creston having nearly 20 percent (19.15) of their students married.

The significant difference in the reasons for attending community college can be illustrated through the review of the two categories accounting for nearly 50 percent (49.79) of the students. The range of the two categories of "Desire for more education" and "Low cost" was from 42.37 percent at Estherville and Centerville Community Colleges to a high of 65.72 percent of the students at Keokuk Community College.

While the chi-square value for father's educational level was not great enough to reject the null hypothesis, there appears to be

differences in the educational level of the father. Combining those categories of college, college graduate, and professional school, a range exists from a low of approximately 12 percent at Estherville Community College (12.04) to a high of slightly over 42 percent at Emmetsburg Community College (42.86) and slightly over 34 percent at Boone Community College (34.29).

While the chi-square value for prior employment was not great enough to be significant the range on this item was from 85.71 percent of the students at Emmetsburg Community College indicating less than 12 months employment prior to attendance at community college to a low of 62.96 percent at Eagle Grove Community College.

Comparison two: How similar are the student bodies of the 16 Iowa community colleges following enrollment?

Null hypothesis two: There are no significant differences between the student bodies of the 16 community colleges on the following variables.

1. Semester hours credit first enrollment at community college
2. Total semester hours completed at community college
3. Cumulative grade point at community college
4. Number of semesters attendance at community college
5. Transfer or terminal
6. Type of housing at community college
7. Extra-curricular activities at community college
8. Amount of community college expenses earned
9. Hours worked while in community college
10. Community college degree
11. Status on leaving.

Tables 56 through 59 provide analysis of variance data on variables one through four of hypothesis two. All of the variables, semester

Table 56. Analysis of variance of semester hours carried first enrollment at community college

Source	D.F.	Sum of squares	Mean square
Between schools	15	1402.912	43.527
Within schools	1697	15736.939	9.273
$F = \frac{87.682}{9.279} = 10.08^*$		$F_{(15, \infty)}^{(.01)} = 2.03$	

*Significant at .01 level.

Table 57. Analysis of variance of semester hours of credit earned at community college

Source	D.F.	Sum of squares	Mean square
Between schools	15	17038.699	1135.913
Within schools	1680	837460.795	498.488
$F = \frac{1064.919}{498.785} = 2.28^*$		$F_{(15, \infty)}^{(.01)} = 2.03$	

*Significant at .01 level.

Table 58. Analysis of variance of cumulative grade point average at community college

Source	D.F.	Sum of squares	Mean square
Between schools	15	223078.583	14871.905
Within schools	1609	11738441.941	7295.489
		$F = \frac{13942.411}{7300.026} = 2.04^*$	$F_{(15, \infty)}^{(.01)} = 2.03$

*Significant at .01 level.

Table 59. Analysis of variance of semesters completed at community college

Source	D.F.	Sum of squares	Mean squares
Between schools	15	421.463	28.097
Within schools	1689	18438.411	10.916
		$F = \frac{26.341}{10.923} = 2.57^*$	$F_{(15, \infty)}^{(.01)} = 2.03$

*Significant at .01 level.

hours carried first enrollment ($F=10.08$), semester hours credit earned at community college ($F=2.28$), semesters completed at community college ($F=2.57$), and cumulative grade point average at community college ($F=2.04$) were all significant at the .01 level.

Table 60 indicates chi-square results for items five through 11 in hypothesis two. Five of the seven variables, type of housing

Table 60. Chi-square results of attribute data of student bodies of the 16 Iowa community colleges following enrollment at the community college

Variables	N	D.F.	χ^2
5. Transfer or terminal	1006	15	14.54
6. Type of housing	1005	45	292.27***
7. Extra-curricular activities	995	120	223.30***
8. College expenses earned	1000	60	74.21
9. Hours worked per week	998	75	126.73***
10. Graduation	1725	15	42.98***
11. Status on leaving	1702	30	257.74***

***Significant at the .005 level of confidence.

($\chi^2=292.27$), extra-curricular activities ($\chi^2=223.30$), hours worked per week ($\chi^2=126.73$), status on leaving ($\chi^2=257.74$), and community college graduation ($\chi^2=42.98$) were found to be significant at the .005 level. Two items, transfer or terminal ($\chi^2=14.54$) and college expenses earned

($\chi^2=74.21$) were not found to be significant.

Conclusion: The null hypothesis of no significant differences on the 11 variables indicated was rejected on nine of the 11 variables. There are statistically significant differences in the student bodies of the 16 Iowa community colleges on these variables. Only in the cases of transfer or terminal and college expenses earned was the null hypothesis not accepted.

The range of semester hours carried the first period of enrollment ranged from a high of 15.36 at Webster City Community College to a low of 12.17 at Clarinda Community College with a mean of 14.34. Differences within the schools can be seen through the wide range in standard deviation ranging from a rather narrow standard deviation at Eagle Grove Community College (1.42) to a wide standard deviation (5.38) at Clinton Community College.

The range of semester hours earned at the community college was from a low mean of 35.98 at Burlington Community College to a high mean at 49.19 semester hours at Emmetsburg Community College. Five community colleges had mean values between 35-39 semester hours. Burlington (35.98), Centerville (38.17), Clarinda (36.22), Marshalltown (39.99), and Southwestern (37.34) were in this group. Eight of the 16 community colleges were in the range 40-45 semester hours. These included: Boone (40.00), Clinton (43.28), Eagle Grove (42.95), Ellsworth (44.36) Estherville (43.21), Fort Dodge (40.00), Muscatine (43.45), and North Iowa (42.27). Three of the 16 community colleges had mean values above 45

semester hours. These included: Emmetsburg (49.19), Keokuk (47.48), and Webster City (45.14).

The significant difference in the grade point average earned at the community college can be noted in the range. Students received a mean GPA at Southwestern Community College of 1.75 contrasted to students at Emmetsburg Community College, where students received a mean GPA of 2.29. Seven of the community colleges had a mean GPA of less than a 2.00. These included: Boone (1.99), Burlington (1.89), Centerville (1.77), Clarinda (1.91), Clinton (1.91), Muscatine (1.96), and Southwestern (1.75). The remaining schools had a mean GPA above the 2.00 average.

The significant difference in number of semesters enrolled can be noted in the range of mean values for the 16 community colleges. Students at Clarinda Community College averaged 2.76 semester hours in attendance. In contrast, students at Keokuk Community College remained an average of 3.41 semesters. The 16 schools were equally divided with eight schools retaining the average student less than three semesters and eight retaining the average student more than three semesters.

The significant chi-square values for type of housing can be noted through the range of percentages indicating various types of housing. All students at Keokuk involved in the study indicated living at home while under one-fourth (22.11 percent) of the students at Ellsworth lived at home. Only three community colleges, Clarinda (44.23), Ellsworth (22.11) and Estherville (39.76), had under 50 percent of the students attending living at home. These same schools also had the

largest percentage of students living in a dormitory situation.

The significant difference in extra-curricular activities can best be noted through the numbers indicating no participation. The highest participation in activities was indicated by students from Muscatine where only 19.30 percent were not participating in some extra-curricular activities and at Ellsworth Community College where 22.11 percent were not involved in activities. The least participation occurred at North Iowa Area Community College, where 68.42 percent of the students reporting were not involved in extra-curricular activities. Five community colleges, Boone (57.14), Burlington (63.05), Fort Dodge (52.48), Marshalltown (51.55), and North Iowa (68.12) had a greater than 50 percent nonparticipation.

The variations between schools, in terms of the number of hours worked per week, which were significant, indicated a range of slightly over 14 percent of the students at Muscatine Community College to a high of 35.79 percent at Ellsworth Community College not working while attending college with a mean value for the 16 schools of slightly over 20 percent (21.94). In contrast, no student at Webster City Community College or Emmetsburg worked over 40 hours per week while nearly 15 percent of the students at Eagle Grove (14.81) were working over 40 hours per week while attending school.

The variations between the 16 community colleges on the basis of percentage of entering students who subsequently graduated were found to be significant. The percent of graduates ranged from 48.72 at

Eagle Grove Community College to a low of 21.43 at Marshalltown Community College. Of the students who enrolled in the 16 community colleges, 32.04 percent graduated from community college.

The variations between the 16 community colleges on the academic standing when leaving the community college were found to be significant. The good standing category ranged from 56.72 percent at Boone Community College to a high of 91.86 percent at North Iowa Area Community College. No students were dismissed for academic reasons at four of the community colleges, Centerville, Clinton, Emmetsburg, and Southwestern. Boone Community College (25.37) and Burlington Community College (28.13) both reported over one-fourth of the students who left were dismissed for academic reasons.

While the chi-square value for the transfer or terminal category was not large enough to be significant, two community colleges, Southwestern and Emmetsburg, had nearly three-fourths (72.34 and 71.43 percent) of the students transfer to a four year school as contrasted with a mean value of 58.30 percent for the 16 Iowa community colleges. Only one school, Keokuk, had less than 50 percent (48.57) of the students in the study transfer.

Although the chi-square value was not great enough to reject the null hypothesis, two community colleges appeared to have a larger number of students earning the total amount of their expenses. Clinton Community College and Muscatine Community College had over 50 percent (57.38 and 54.39) of the students indicate earning 75-100 percent of their college expenses as contrasted with 41.50 percent for the 16

community colleges. Three community colleges, Centerville, Clarinda, and Ellsworth, had under one-third (30.51, 32.96, and 27.37) of the students indicate earning 75-100 percent of their college expenses.

Comparison three: How similar are the student bodies of the 16 community colleges after terminating at the community colleges'?

Hypothesis three: There are no significant differences in the 16 community colleges' students bodies regarding what students achieve after leaving the community college in the following areas:

1. Percentage of transfer students
2. Type of institution (public or private)
3. Semester hours completed
4. Grade point average
5. Number of four year graduates
6. Semesters attended four year school.

Table 61 contains chi-square data on items 1, 2 and 5 of hypothesis three above. None of the three items: percent of transfer students

Table 61. Chi-square results of attribute data of student bodies of the 16 Iowa community colleges after leaving the community college

Variables	N	D.F.	2
1. Percentage of transfer	1006	15	14.54
2. Type of institution	579	30	18.19
3. Number of four year graduates	1007	15	30.76

($\chi^2=14.54$), type of transfer institution ($\chi^2=30.76$), and number of four year graduates ($\chi^2=18.19$) were found to be significant.

Tables 62, 63, and 64 provide analysis of variance data for hypothesis three. None of the three items: semester hours completed

Table 62. Analysis of variance for semester hours completed at transfer institutions

Source	D.F.	Sum of squares	Mean square
Between schools	15	13124.009	847.934
Within schools	529	413171.746	781.043
$F = \frac{820.25}{782.52} = 1.09$		$F_{(15, 400)}^{(.05)} = 1.69$	

Table 63. Analysis of variance for cumulative grade point average at transfer institution

Source	D.F.	Sum of squares	Mean square
Between schools	15	92198.442	6146.562
Within schools	562	2466590.259	4689.335
$F = \frac{5762.403}{4698.267} = 1.31$		$F_{(15, 400)}^{(.05)} = 1.69$	

Table 64. Analysis of variance for semesters attended at four year school

Source	D.F.	Sum of squares	Mean square
Between schools	15	466.286	31.086
Within schools	528	17264.155	32.697
$F = \frac{29.143}{32.759} = .95$		$F_{(15, 400)}(.05) = 1.69$	

at transfer institution ($F=1.09$), cumulative grade point average at transfer institution ($F=1.31$), and semesters attended at four year school ($F=.95$) were found to be significant.

Conclusion: Hypothesis three remains tenable. Based on data in this study, no significant difference was found in the student bodies of the 16 Iowa community colleges on the variables involved in hypothesis three.

Two community colleges, Emmettsburg and Southwestern had slightly over one-fourth (28.57 and 27.66) of their students who terminated college enrollment upon leaving the community college. By contrast, over 50 percent of the students from Keokuk Community College (51.43) indicate termination of college enrollment upon leaving the community college. While the chi-square value is not great enough to indicate significance, it would appear that differences might exist.

Although the chi-square value did not support the rejection of the null hypothesis regarding the selection of public or private institutions, the range of percentages regarding transfer might indicate some differences. Excluding Emmettsburg Community College because of low n value, the range of students transferring to a private four-year school ranged from a low of 6.24 percent at Southwestern Community College to a high of 35.29 at Eagle Grove Community College and Keokuk Community College. Again a rather low n is involved in both of these colleges. Within the extremes, the range appears generally in the 14-20 percent of the students transferring with a mean value of 17.57.

The chi-square values for students completing degrees were insufficient to accept the null hypothesis. Twelve of the 16 community colleges were in the 40 to 60 percent of students who had transferred, were graduated at the time of the study. Those community colleges not falling in this range included Eagle Grove (38.89), Emmettsburg (80.00), Estherville (39.13), and Muscatine (31.43). Mean for the 16 colleges was 49.75 percent. Additionally, 15.22 percent of the total group were still enrolled with a range of nearly 25 percent (24.36) from Centerville Community College to no students still enrolled from Emmettsburg Community College.

Inspection of the data on the number of semester hours completed at transfer institution reveals a range from slightly over a mean of 45 semester hours completed by students from Muscatine Community College (45.72) to a high mean value of slightly over 69 semester hours completed by students from Emmettsburg Community College (69.60). With the exception of these two colleges, the remainder of the colleges fall in a range

of 50-65 semester hours of credit earned at the transfer institution with a mean value of 58.80 semester hours.

F values for the cumulative grade point average of the transfer institution were below the level of significance and the null hypothesis was not rejected. Data reveals means in 2.30 to 2.60 GPA range with the exception of the high and low values of 2.81 at Keokuk Community College and 2.11 at Muscatine Community College respectively.

While the null hypothesis could not be rejected on the basis of the data available, some items should be noted regarding the number of semesters attended at the transfer institution. The range of semesters attended at the transfer institution was from a low approximately 3.5 semesters attended by students from Muscatine Community College to a high of 5.2 semesters attended by students from Emmetsburg Community College. The mean for all students in the study who transferred was 4.23 semesters.

Comparison four: How similar are the student bodies of the 16 Iowa community colleges four years after the first enrollment?

Hypothesis four: There are no significant differences in the student bodies of the 16 community colleges regarding the following points:

1. Future educational plans
2. Present occupation
3. Present salary range
4. Longevity on present job.

Table 65 indicates chi-square data for hypothesis four. None of the four variables tested in hypothesis four, future educational plans ($\chi^2=73.97$), present occupation ($\chi^2=213.29$), longevity on present job

Table 65. Chi-square results of attribute data of student bodies of the 16 Iowa community colleges four years following the first enrollment.

Variables	N	D.F.	2
1. Present occupation	1004	210	213.29
2. Future educational plans	486	75	73.97
3. Longevity on present job	796	60	62.53
4. Present salary range	636	90	80.81

($\chi^2=62.53$) or present salary range ($\chi^2=80.81$) were found to be significant.

Conclusion: Hypothesis four remains tenable. On the basis of the data studied there were no significant differences between the 16 Iowa community colleges on these four variables.

While the chi-square values were not great enough to reject the null hypothesis the following items should be noted in relation to these areas.

Twenty percent of the students who had enrolled at Keokuk Community College indicated a desire to return to Keokuk and complete a community college degree. This is contrasted to a mean value for all schools of 4.35 percent indicating a desire to return to community college.

Those desiring to complete a four year degree ranged from none at Keokuk Community College to a high of 20 percent at Boone Community

College with a mean value of 9.68 for students from all community colleges.

Professional, armed services, and student categories in occupation accounted for the majority of the students. A range existed from 6.45 percent of the students in the professional category at Webster City Community College to a high of nearly one-fourth (23.40 percent) of the students from Southwestern Community College at Creston. Armed services accounted for over 16 percent of the students formerly enrolled at Ellsworth Community College (16.84) to no students from Emmetsburg Community College in this category with a mean at 13.04 percent. The student category accounted for over one-fifth of the former community college students occupations. The range was from nearly 30 percent (29.03) at Keokuk Community College to a low of 5.71 percent at Boone Community College.

The longevity on the present job indicates some noticeable differences in a few of the categories. Students indicating employment on the present job of over 48 months ranged from a high of over 17 percent at Keokuk Community College (17.14) with an overall mean of 5.05 percent for the 16 Iowa community colleges.

The longevity on the present job of 12 months or less was indicated by 41.50 percent of the students returning questionnaires with a range from 27.66 percent at Southwestern Community College at Creston to a high of 71.43 percent at Emmetsburg.

Comparison five: How similar are the reactions of the student bodies

regarding their experience in the 16 public community colleges of Iowa?

Hypothesis five: There are no significant differences in the student bodies of the 16 community colleges regarding the following variables:

1. Reason for leaving
2. Difficulty of course work
3. Quality of teaching
4. Overall value of the community college.

Table 66 provides data on the chi-square application to the variables for comparison five. The hypothesis remains tenable for all but

Table 66. Chi-square results of attribute data of student bodies of 16 Iowa community colleges regarding student experiences at the community college

Variables	N	D.F.	χ^2
1. Reason for leaving	997	195	208.48
2. Difficulty of courses	1002	30	33.24
3. Quality of teaching	998	45	69.04*
4. Overall evaluation	977	60	61.09

*Significant at .025 level of confidence.

one of the variables. The chi-square of 69.04 with 45 degrees of freedom for quality of teaching was significant at the .025 level of confidence. The remaining variables of reason for leaving ($\chi^2=208.48$), difficulty of courses ($\chi^2=33.24$), and overall evaluation ($\chi^2=61.09$)

were not found significant through the use of the chi-square technique.

Conclusion: Hypothesis five was rejected for the one variable, quality of teaching in the community college. On the basis of data studied, there are significant differences between the 16 community colleges. Hypothesis five remains tenable for the remaining three variables. No significant differences were found for these variables between the 16 community colleges.

The chi-square value for quality of teaching was sufficient to reject the null hypothesis. Those students indicating they felt the community college teaching was excellent, ranged from a low of 9.47 percent at Ellsworth Community College to a high of 34.29 percent of the students from Boone Community College with an overall mean of 15.81 percent for the 16 community colleges. Few students felt the quality of instruction was poor with only 5.77 percent of the students from Clarinda indicating this choice and eight of the colleges having no students selecting this choice. The good category was selected by 62.75 percent of the total sample with a range from slightly over 49 percent (49.18) of the students at Clinton selecting this choice to a high of nearly 80 percent (78.35) at Marshalltown Community College.

Although the chi-square values were too small to reject the null hypothesis the following items should be noted.

The major reasons for leaving the community college are completion of program and transfer. Those students indicating completion of program as the major reason for leaving accounted for nearly one-half of

those returning questionnaires. The range was from a low of 28.57 percent at Emmetsburg Community College to a high of 61.02 percent at Estherville Community College.

Transfer was indicated by 17.79 percent of the students as the reason for leaving with a range of 6.78 percent at Centerville Community College to a high of 42.86 percent at Emmetsburg Community College. Other categories were generally low in percentage of students indicating these.

The category of adequate in regards to course work at the community college accounted for 90.01 percent of the students returning questionnaires with over three-fourths (77.78 percent) of the students at Eagle Grove indicating course work adequate with the remaining colleges above 80 percent responding in this category. Only three colleges, Clinton (14.75), Eagle Grove (22.22), and Marshalltown (10.31) did over 10 percent of the students indicate course work being too easy.

The reactions to community college by former students received a very narrow range of percentages indicating a rather close agreement regarding the reaction of students to the community college education.

Section G

Delineation of specific characteristics which predict success in the community college program.

The data in Section G provides for the delineation of specific characteristics which might be used to predict success in the community,

i.e., community college graduation. Predictive variables were analyzed through the use of multiple regression techniques.

Problem: Are there specific student characteristics which can be used to predict success in the community college, i.e., satisfactory completion of a two-year program (graduate).

Null hypothesis: There is no relationship between each of the following characteristics and successful completion of the community college program.

1. High school class rank
2. High school class size
3. ACT English
4. ACT Math
5. ACT Social Studies
6. ACT Natural Science
7. ACT Composite
8. Family income
9. Educational level of mother
10. Educational level of father
11. Marital status
12. Age
13. Sex
14. Years prior employment
15. Extra-curricular activities
16. Hours worked while in college.

The above variables were subjected to the step-up method of selection of variates for prediction described by Snedecor and Cochran (61). The following were noted in the initial step-up process involving the 16 variables.

1. High school class rank with an F value of 51.91 provided the best indicator of community college graduation.
2. The addition of the five American College Tests resulted in an F value of 1.02 which was not significant at five degrees of freedom.

3. The addition of extra-curricular activities resulted in an F value of 26.50 which was significant.
4. Family income provided additional discriminating power; however, the addition of father's educational level and mother's educational level reduced the effectiveness of income in the regression. It is evident that inter-correlations between these variables are quite high.
5. The addition of age entered the community college and years prior employment resulted in an F value of 2.14 which is not significant.
6. The remaining variables provide no significant improvement in reduction of the sum of squares.

Following the initial run, a step-up process on the most significant variables was made. Table 67 indicates the F values for the three variables that contributed most to the regression.

Using the three variables indicated in Table 67, preliminary work on a discriminant function was completed. To determine the separation of means on the three variables by community college graduation or nongraduation the means and standard deviations were calculated. The probability of misclassification was calculated on each of the three variables. Tables 68, 69, and 70 indicate the results. The probability of misclassification is from $\frac{\delta}{2\sigma}$ to ∞ in the normal curve.

If independence of variables is assumed the possibility of

Table 67. F values for variables included in the regression equation

Variable	F
High school class rank	43.537**
Extra-curricular activities	29.174**
Father's educational level	4.221*
	$F(1,1000)(.01) = 3.85$
	$F(1,1000)(.05) = 6.66$

* Significant at .05 level.

** Significant at .01 level.

Table 68. Probability of misclassification on the basis of high school class rank

Variable	Mean	Standard Deviation
Total population	.488	.251
Graduates	.5882	.231
Nongraduates	.4383	.245

$$\frac{U_2 - U_1}{2\sigma} = \frac{\delta}{2\sigma} = \frac{.1499}{.502} = .298$$

= .3859 or probability of misclassification-

38.59 percent

Table 69. Probability of misclassification on basis of extra-curricular activities

Variables	Mean	Standard Deviation
Total population	1.456	.552
Graduates	1.3342	.062
Nongraduates	1.5398	.498

$$\frac{U_2 - U_1}{2\sigma} = \frac{\delta}{2\sigma} = \frac{(1.5398 - 1.3342)}{(1.104)} = \frac{.2056}{1.104} = .19$$

= .4247 or probability of misclassification -

42.47 percent

Table 70. Probability of misclassification on basis of father's educational level

Variables	Mean	Standard Deviation
Total population	2.867	1.171
Yes	2.7556	1.1156
No	2.9593	1.2020

$$\frac{(U_2 - U_1)}{2\sigma} = \frac{\delta}{2\sigma} = \frac{(2.7556 - 2.9593)}{(2.342)} = \frac{.2037}{2.342} = .09$$

$\frac{\delta}{2\sigma}$ to α = .4641 or probability of misclassification -

46.41 percent

misclassification would be (61) $\sqrt{(d_i/s_i)^2}$ or $\sqrt{1.1436}$, giving a misclassification of approximately 31 percent. Since correlations do exist the factor of misclassification would be considerably greater.

With the above probability of error existing, the developed equations would be little improvement over a random prediction by "flipping a coin".

Because of the above factors of misclassification, the discriminate function would be of marginal value in the prediction of community college success based on graduation. Contingency tables were constructed on the two attribute variables selected to provide further information regarding the predictability of these factors in community college graduation.

Table 71 indicates the contingency table for extra-curricular activities and community college graduation.

It should be noted that students participating in extra-curricular activities are approximately equally divided between those who graduated (50.4 percent) and those who did not graduate (49.6 percent), while with those who did not take part in activities only slightly over one-fourth (28.5) of the students graduated and slightly over 70 percent (71.5) did not graduate. This approximate one-half split between those who are in activities and graduate and those who do not results in a lack of power to discriminate to a large degree in a prediction equation.

A condensed contingency table for father's educational level and community college graduation is shown in Table 72. The groups were

Table 71. Extra-curricular activities vs. community college graduation

Graduation		Extra-curricular		
		Yes	No	Total
		n = 276	n = 128	n = 404
Yes	Row percent	= 68.3	31.6	40.6
	Col. percent	= 50.4	28.5	
		n = 272	n = 319	n = 591
No	Row percent	= 46.0	54.0	59.4
	Col. percent	= 49.6	71.5	
		n = 548	n = 447	n = 995

Table 72. Father's educational level vs. community college graduation

Graduation	Father's educational level		
	H.S. graduate or below	Above h.s. graduate	total
Yes	337	68	405
	Col. percent 42.7	Col. percent 32.8	
No	451	139	590
	Col. percent 57.3	Col. percent 67.14	
	788	207	995

divided according to high school graduate or less and above high school graduation. Chi-square was 6.88 with one degree of freedom. This level is significant at .01. The trend toward students whose father did not attend college, graduating from community college while those whose fathers attended college is evident; however, the value in prediction is somewhat marginal because of the closeness of the range of values.

Conclusion: The null hypothesis of no predictability of community college graduation on the basis of the selected variables was rejected. Through the use of regression techniques the three variables, high school class rank, extra-curricular activities, and father's educational level were selected as contributors to a prediction equation of community college success. Although statistically significant the probability of misclassification through the use of the variables made the development of prediction equations of marginal value and the discriminate equation was not developed.

The division of the sample into the two component parts, namely, graduating from community college or not graduating from community college on the selected variables resulted in two groups with a narrow difference in means. Assuming the normality of the curve around the two means the overlap in the tails of the curve results in a low predictability based on these selected variables. The larger this overlap is the greater is the probability of misclassification.

CHAPTER V: SUMMARY, DISCUSSION, IMPLICATIONS FOR
EDUCATION AND SUGGESTIONS FOR FURTHER RESEARCH

Summary

The major purpose of this investigation has been, in the broadest sense, to describe students who first enrolled as full-time, Arts and Science students in the fall of 1966 in 16 Iowa community colleges. Three approaches were used to obtain necessary data. First, a randomly selected sample 30 percent was selected from the first-time, full-time, Arts and Science students who enrolled in one of the 16 Iowa community colleges in 1966. The community colleges were requested to provide the basic information regarding scholastic and test measures available in the college's records. Second, the student information form was mailed to all students in the above category. This questionnaire provided data concerning student history as well as reactions to the community college which they attended. Third, for those students choosing transfer, a form designed to provide information regarding scholastic achievement following transfer was forwarded to the transfer institution for completion. Information received from these three sources provided the data for the investigation.

A total of 1725 students comprised the original sample on which information was received from the community colleges. Student information questionnaires were received from 1012 students accounting for approximately 58 percent of the students in the original sample. Transfer

college information was requested on 619 of these students and was received on 577 of the students accounting for approximately 93 percent.

Data from the preceding sources were analyzed in a number of different ways. Information regarding the 16 community colleges was analyzed through the use of frequency distributions, means and standard deviations, single classification analysis of variance and chi-square. Data for the 16 community colleges was analyzed through the use of regression technique to determine the feasibility of using certain characteristics in the prediction of success in the community college as measured by the completion of an associate in arts degree.

Five null hypothesis were constructed to test differences between the student bodies of the 16 Iowa community colleges.

Findings have been summarized in terms of answers to questions posed in CHAPTER III. Section I summarizes the descriptions and, on applicable items, the results for tests of significance are noted.

Section I

1. What kind of students enrolled in the Arts and Science programs of the 16 Iowa community colleges in the fall of 1966?

Using a coded value for high school class rank with "0" high and "100" low, the mean value for all students with information available was 53.72 or slightly below the middle of their high school class.

Marshalltown Community College students represented the highest group

(44.27) and Clarinda Community College the lowest group (67.27). Based on data presented, the null hypothesis was rejected. The differences noted between the 16 Iowa community colleges regarding high school rank were statistically significant.

Mean value for high school graduating class size was slightly over 175 students for the 16 community colleges. Burlington Community College students had a mean class size of slightly over 266 students which represented the high for the 16 colleges. Southwestern Community College students had a mean value of slightly over 113 students in their high school class which represented a low for the 16 community colleges. Following statistical analysis the null hypothesis was rejected. The differences noted in the size of high school graduating class between the 16 community colleges were statistically significant.

Marshalltown Community College students had a high mean standard score value of 20.13 on the English portion of the American College Tests while Boone Community College students had the low mean standard score value of 17.33 for the 16 community colleges. Mean value for the 16 community colleges was a standard score 18.87. Considering the data presented, the null hypothesis was rejected. The differences noted in the American College Test-English between the 16 community colleges were statistically significant.

Marshalltown Community College students had a mean standard score value of 21.45 for the mathematics portion of the American College Tests.

Emmettsburg Community College students had a low mean standard score value of 18.18 with a mean value for the 16 community colleges of 19.94. Based on data presented, the null hypothesis was rejected. The differences noted in the American College Test-Mathematics between the 16 community colleges were statistically significant.

Marshalltown Community College students had a high mean standard score value of 21.73 on the social science portion of the American College Tests. Muscatine Community College students had the low mean standard score value for the 16 community colleges of 19.24. Mean value for the 16 community colleges was 20.39. Following analysis, the null hypothesis was rejected. The differences in the American College Test-Social Science between the 16 community colleges were statistically significant.

Marshalltown Community College students had the high mean standard score value of the 16 community colleges of 22.23 on the natural science portions of the American College Tests. Clarinda Community College students had the low mean standard score value of the 16 community colleges of 19.49. Mean value for the 16 community colleges was 20.73. Based on data presented, the null hypothesis was rejected. The differences noted in the American College Test-Natural Science between the 16 community colleges were statistically significant.

Marshalltown Community College had the high mean value of the 16 community colleges of 21.50 standard score points on the composite score of the American College Tests. Clarinda Community College students

had the low value with a mean standard score of 19.17. The mean value for the 16 community colleges was 20.09. Considering available data the null hypothesis was rejected. The differences noted in the American College Test-Composite between the 16 community colleges were statistically significant.

Mean age at time of entrance for the 16 community colleges was 18.42 years with a range of mean values from 17.71 years at Emmettsburg Community College to a high of 19.04 years at Eagle Grove Community College. Based on data presented, the null hypothesis was rejected. The differences noted in the age at time of entrance between the 16 community colleges were statistically significant.

Nearly 80 percent (79.41) of the students enrolling in Southwestern Community College in 1966 were male and slightly over 20 percent (20.59) female. This is contrasted with 60 percent male and 40 percent female at Burlington Community College with mean values for the 16 community colleges of 68.88 percent male and 31.12 percent female. Following statistical analysis, the null hypothesis was rejected. The differences noted in the percentage of male and female students between the 16 community colleges were statistically significant.

Over three-fourths (78.06) of the students indicated their fathers had completed high school or less for an educational level. This ranged from a low of 57.14 percent reporting father's educational level at high school graduation or less at Emmettsburg Community College to a high of 86.76 reporting father's educational level of high school

graduation or less. On the basis of data presented, the null hypothesis remains tenable. The differences noted between the 16 community colleges in educational level of father were not great enough to be significant.

Nearly three-fourths (70.93) of the students reported mother's educational level as high school graduate or below. Range was from 60 percent reporting less than high school graduation for mother's educational level at Boone Community College to a high of 85.19 percent reporting high school graduation or less at Eagle Grove Community College. Considering data presented, the null hypothesis was rejected. The differences noted between the 16 community colleges in mother's educational level were significant.

Forty percent of the students indicated traveling less than one mile to school. About 30 percent traveled one to nine miles, slightly over seven percent 10 to 19 miles and approximately one-fifth traveled over 20 miles. Slightly over three-fourths of the students from Ellsworth Community College (76.84 percent) indicated traveling less than one mile to and from school each day. This is contrasted by students at Keokuk Community College where approximately eight and one-half percent indicated traveling one mile or less to and from school each day. Keokuk Community College also had the largest portion (34.29 percent) of their students traveling over 20 miles to and from school each day and Ellsworth Community College had the lowest (12.63 percent). Based on data presented, the null hypothesis was rejected. The differences noted between the 16 community colleges in the distance traveled

to and from school each day were significant.

Slightly less than seven percent (6.81) of the students enrolled in the 16 community colleges indicated being married while attending community college. Nearly 20 percent (19.15) of the students from Southwestern Community College reported being married while attending community college. Several schools reported no married students. Following statistical analysis, the null hypothesis was rejected. The differences noted between the 16 community colleges in the number of students indicating married status while attending college were significant.

Nearly three-fourths of the students (73.32) reported working less than 12 months at a full-time position prior to attending community college. This ranged from over 85 percent (85.71) at Emmetsburg Community College to a low approximately 62 percent (62.96) at Eagle Grove Community College. Based on data presented, the null hypothesis was rejected. The differences noted between the 16 community colleges in terms of the number of years working at a full-time position prior to attending college were not significant.

Nearly 50 percent (49.79) of the students indicated either desire for more education or low cost as reasons for attending community college. Range on these two items was from a low of 42.37 percent of the students at Estherville Community College and Centerville Community College indicating these as a reason for attending to a high of 65.72 percent of the students at Keokuk Community College. Considering data presented, the null hypothesis was rejected. The differences noted in

reasons for attending community college were significant between the 16 community colleges.

2. What were the characteristics of the student during his enrollment at one of the 16 Iowa community colleges in 1966?

Students of Marshalltown Community College in 1966 carried a mean of 15.77 semester hours of credit during their first enrollment. This is contrasted with a mean of 12.17 semester hours carried by students enrolling at Clarinda Community College and a mean for all students of 14.34 semester hours. Policies in handling of records may account for some of these differences. Following statistical analysis, the null hypothesis was rejected. The differences noted between the 16 community colleges in the number of hours of credit carried the first enrollment were significant.

The highest community college grade point average occurred at Emmetsburg Community College where the mean value was 2.29. The low was at Southwestern Community College where the mean value was 1.75. The overall mean for the 16 community colleges was 1.99. Following analysis of data presented, the null hypothesis was rejected. The differences noted between the 16 community colleges in the cumulative grade point average earned at the community colleges were significant.

Students enrolled in the 16 community colleges attended approximately three semesters (2.97) prior to terminating. Clarinda Community College students attended an average of 2.76 semesters and Keokuk Community College students stayed at community college the longest, averaging

3.41 semesters prior to terminating. Considering data presented, the null hypothesis was rejected. The differences noted between the 16 community colleges in the number of semesters of attendance at the community college were significant.

Nearly 60 percent (58.30) of the students enrolled in 16 community colleges indicated transfer to a four-year college or university to work toward a degree. This ranged from nearly three-fourths indicating transfer at Southwestern Community College (72.34) to a low of slightly under 50 percent (48.57) at Keokuk Community College. Following analysis of data, it was concluded that the null hypothesis remains tenable. The differences noted between the 16 community colleges in the number of students transferring to a four-year school are not statistically significant.

Nearly 60 percent (59.09) of students enrolled in the 16 Iowa community colleges either lived at home or in their own home. This ranged from 100 percent of the students living at home at Keokuk to a low of slightly over one-fifth (22.11 percent) of the students at Ellsworth Community College where dormitories are available. Considering data presented the null hypothesis was rejected. The differences noted between the 16 community colleges in terms of living accommodations while attending community college were significant.

Over 40 percent of the enrolled students (44.17 percent) indicated no participation in extra-curricular activities while in community college. A wide range occurred between the schools with only 19.30

percent of those students at Muscatine Community College indicating no participation to a high of 68.42 percent indicating no participation at North Iowa Area Community College. Based on data presented, the null hypothesis was rejected. The differences noted between the 16 community colleges in terms of participation in extra-curricular activities while attending community college were significant.

Over 40 percent (41.50) of the students indicated earning three-fourths or greater of their college expenses. Nearly 60 percent (57.38) of the students from Clinton Community College indicated earning over three-fourths of their college expenses while only 27.37 percent of Ellsworth Community College students earned this amount. Following statistical analysis, the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the amount of college expenses earned.

Approximately one-fifth (21.94) of the former community college students in the sample indicated they did not work while attending school. This ranged from slightly over one-third (35.79 percent) at Ellsworth Community College to a low of 14.29 percent at Keokuk Community College and Boone Community College. Those working over 40 hours per week accounted for over 10 percent of the respondents at Eagle Grove Community College, (14.81), Keokuk Community College (11.03), and Southwestern Community College (12.77) while two community colleges, Emmetsburg and Webster City had no former students in this category. Based on data presented the null hypothesis was rejected. The differences noted between the 16 community colleges in number of hours worked while attending community college

were significant.

Nearly 50 percent (48.72) of the students from Eagle Grove Community College received a degree from the community college. This is contrasted to slightly over one-fifth (21.43 percent) of the students from Marshalltown Community College who received a community college degree. Slightly under one-third (32.04 percent) of the total for the 16 community colleges received degrees from the community colleges. The differences noted were significant when analyzed through the use of chi-square.

Most students are categorized as being in good standing when leaving the community college. Over three-fourths (78.10 percent) of the students left in good standing. Two schools, Emmetsburg Community College (92.31) and North Iowa Area Community College (91.86) indicated over 90 percent in the good standing category when leaving. Boone Community College indicated a low of 56.72 percent leaving with the good standing category. The remainder of the students either were on probation or dismissed. The differences noted were significant when analyzed through the use of chi-square.

3. What are the characteristics of the individuals who enrolled in one of the 16 Iowa community colleges in 1966?

Nearly three-fourths of the students (72.34 percent) from Southwestern Community College indicated transfer following termination at the community college. This is contrasted with slightly under one-half (48.57 percent) of the students from Keokuk Community College transferring. For the 16 community colleges nearly 60 percent (58.30) of

of the students transferred following termination at the community college. Following statistical analysis, the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the percentage of students who chose to transfer to a four-year institution.

Approximately 80 percent (82.43) of those students transferring following termination at the community college selected a public institution either within the state of Iowa or out of state to attend. Only 17.57 percent selected private schools. Private school transfers accounted for slightly over one-third (35.29 percent) of those who transfer at Eagle Grove Community College and Keokuk Community College. No students from Emmettsburg Community College indicated transfer to a private school. Considering data presented, the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the number of students selecting public or private four-year colleges when transferring.

The mean grade point average at the transfer college ranged from 2.11 at Muscatine Community College to a high of 2.81 at Keokuk Community College with the remaining colleges falling in the range of 2.30 to 2.60. Based on data available, the null hypothesis remains tenable.

The mean number of semesters of enrollment at the four-year school for all community college students was slightly over four semesters, ranging from a low of 3.47 semesters for the students from Muscatine Community College to a high of 5.20 semesters for former Emmettsburg

Community College students. Considering data presented, the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the number of semesters attendance at the four-year college.

Those students who transferred to a four-year school following attendance of the community college completed an average of 58.80 semester hours of credit. The range was a low of 45.72 semester hours of credit earned by students at Muscatine Community College to a high of 64.90 semester hours of credit earned by students previously enrolled at Marshalltown Community College. Following analysis of data presented, it was concluded that the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the number of semester hours earned at the four-year college.

Approximately one-half (49.75 percent) of the students who transferred following attendance at community college received four-year college degrees. Eighty percent of the students from Emmetsburg Community College who transferred had completed degrees while 31.43 percent of the students who previously enrolled at Muscatine Community College had graduated from the four-year college. Based on analysis of data through chi-square, the null hypothesis remains tenable.

4. What is the present status of the individuals who enrolled in one of the 16 Iowa community colleges in 1966?

Only slightly over four percent (4.35) of the former students who did not complete college indicated an interest in returning to community college and completing. Keokuk Community College students react most

positively to returning to community college. Twenty percent of the former students indicated a desire to complete community college. Slightly under 10 percent (9.68) indicated a desire to complete a four-year degree with a range from 20 percent at Boone Community College to a low of no one indicating this as a choice at Keokuk Community College. The remainder of the students indicated being uncertain about future plans or having given up further educational plans. Based on data presented, the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the future educational plans of former community college students.

Over one-third of the former students indicated either student status or armed services as their present occupational status. The professional status category accounted for the next largest group, accounting for 15.81 percent of the total. Considering data presented, the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the present occupational status of former community college students.

Over 80 percent (81.63) indicated an annual income of between \$2500 and \$9,999, with the largest group (34.35 percent) falling in the \$5,000 to \$7,499 range. Following statistical analysis, it was concluded that the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the present annual income of former community college students.

Nearly 40 percent (41.50) of the students indicated employment on

their present job for less than 12 months. Of the former students at Centerville Community College 55.93 percent indicated employment in present position less than 12 months while 27.66 percent of the former students at Southwestern Community College indicated present employment of 12 months or less. Approximately 15 percent (14.53) of the students indicated employment on present job of from 12 to 23 months. Slightly over 10 percent (10.47) indicated 24 to 36 months employment and slightly over 12 percent (12.26) indicated employment on present job of over 36 months. Considering the data presented, the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the longevity on their present job of the former community college student.

5. What is the reaction of the individuals who enrolled in the 16 community colleges in 1966 toward their community college experience?

The large majority of former students (90.01 percent) considered their coursework adequate at the community college. Nearly one-fourth (22.22 percent) of the students from Eagle Grove Community College felt the coursework was too easy while no students from Emmetsburg reported that the coursework was too easy. Slightly over six percent (6.45) of the students from Webster City indicated the coursework too difficult while no students from seven schools selected this choice. After statistical analysis, the null hypothesis remained tenable. No significant differences were noted between the 16 community colleges in terms of the difficulty of coursework as indicated by former students.

The majority of students (62.75 percent) felt instruction was good

and 15.81 percent indicated the instruction excellent. Those indicating excellent included 9.47 percent of the students from Ellsworth and 34.29 percent of the students from Boone which constituted the range for the excellent category. Students selecting the fair category ranged from 7.69 percent of those from Clarinda Community College to a high of 31.15 percent of the students from Clinton Community College. The poor category was selected by only 1.48 percent of the students involved in the sample. Based on data presented, the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the quality of instruction as indicated by former students.

Completion of program and transfer accounted for two-thirds of those students who left the community college. Dissatisfaction accounted for over 10 percent at three community colleges, Centerville (10.17), Estherville (10.84), and North Iowa (11.28). Financial reasons were indicated by over 10 percent of the students from Keokuk Community College. Selective service calls were responsible for over 10 percent of terminations at three community colleges, Boone (14.29), Emmetsburg (14.29), and Muscatine (12.28). Other reasons accounted for varying percentages, all under the 10 percent figure. On the basis of data presented, the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the reasons for leaving the community college.

Over three-fourths (82.12 percent) of the former students felt community college was helpful, moderately helpful, or extremely helpful.

Little help accounted for 10.67 percent of the total responses, ranging from 4.26 percent at Southwestern Community College at Creston to a high of 16.13 percent at Webster City Community College. Only one college, Muscatine, had greater than 10 percent, (12.28), of the students indicating no help. Considering data presented, the null hypothesis remains tenable. No significant differences were noted between the 16 community colleges in terms of the overall value of the community college as indicated by former students.

A sixth hypothesis was developed and tested regarding the predictability of completion of community college in terms of graduation. This hypothesis was rejected. Using regression techniques three variables, high school class rank, extra-curricular activities, and father's educational level were found to be statistically significant in determining community college graduation. Due to lack of separation of the three variables, the discriminant function would misclassify individuals in a large portion of the cases and the equations were not included in the study.

Discussion

The variables studied indicated that student bodies of the 16 community colleges do differ significantly when academic characteristics relating to admission and factors associated with attendance at the community college were considered. These differences tend to disappear after the student has terminated enrollment at the community college.

Transfer students appear to graduate from four-year colleges, achieve approximately the same grade point average in about the same proportion from the 16 community colleges. The categories of income and the positions held also indicate a similar pattern for all 16 community colleges.

The reactions former students have toward the community college appear to be nearly the same with the exception of the reaction toward the quality of instruction received at the community college. Students contemplating attendance at one of the community colleges should take note of schools where a high percentage of students felt instruction was excellent. These included: Boone, Clarinda, Estherville, and Webster City with over one-fifth of the students feeling the quality of instruction was excellent. It should perhaps also be noted that only one of the colleges, Clinton, had students who indicated instruction was poor.

While academic variables studied indicated significant differences occurring, the student selecting a school should perhaps be more concerned with specific programs designed to handle specific situations, i.e., reading, study skills, advanced placement, rather than relying on the differences in means to provide answers, since the ranges involved in the academic area are somewhat narrow.

In terms of other variables, those that might be of importance to prospective students and which differences occur between the 16 community colleges would be the type of housing available, extra-curricular activities and hours worked per week. Three community colleges, Ellsworth, Estherville, and Clarinda indicated dormitory

facilities available for students which might be a consideration for prospective students. Since differences did occur this type of information should be secured by the prospective students. Since the extra-curricular activity category was significantly different between the 16 community colleges and this variable also was significant in the prediction of success as measured by community college graduation the variety and type of extra-curricular activities should be considered. Those activities of interest to the prospective student should be considered.

The hours worked while in community college should be analyzed by the prospective student. If the norm for the college is less than the prospective student must spend in order to stay in college, a question might be raised about the feasibility of the students ability to handle both the class load and the amount of work.

College faculty and administration should be prepared to note the differences occurring and take these items into consideration when planning programs and improvements in the college. A program appropriate to central Iowa might be inappropriate to another section of the state with a different socioeconomic climate and schools in other states within commuting distance.

Conclusions

On the basis of this study the following conclusions are offered:

1. Statistically significant differences were found

between the freshmen classes of the 16 Iowa community colleges. Highly significant differences occurred in size of high school class, commuting distance to college and marital status. Only in the case of educational level of father, was no difference detected.

2. Statistically significant differences were found between the freshmen classes of the 16 Iowa community colleges following enrollment. Highly significant differences were detected in areas of hours carried first enrollment, type of housing, extra-curricular activities and hours worked per week while attending college. In the cases of college expenses earned and transfer or terminal education, no significant differences were detected.
3. Hypothesis three remains tenable. No statistically significant differences were detected in the student bodies of the 16 Iowa community colleges following their termination at the community college.
4. Hypothesis four remains tenable. No statistically significant differences were found in future educational plans, present occupation, present salary range, and longevity on present job.
5. Student body reactions to the 16 Iowa community colleges were found not significant except in the case of quality of teaching.

6. Through the use of regression techniques those variables found to be most valuable in predicting success as measured by community college graduation included high school class rank, involvement in extra-curricular activities, and father's educational level. While these variables were statistically significant, the measured means of the graduates and nongraduate groups were not sufficiently separated to provide for a discriminate function without a large percent of misclassification.

Limitations

This study was limited to the 1725 students randomly selected from entering first-time, full-time, Arts and Science students in 16 Iowa community colleges in 1966 and the subsequent responses returned by students and colleges.

Incomplete data on college transcripts and responses not completed on questionnaires returned required the use of a reduced number of cases on a number of the variables involved. The regression statistic, which requires information on all variables before including a student, was forced to function on a reduced number of cases because of missing information.

No attempt was made to analyze differences in programs offered in the 16 Iowa community colleges or to make recommendation for changes

in the Arts and Science programs.

No attempt was made to discern differences in the recording of information between colleges. Some differences may be accounted for through differences in policies between schools.

Recommendations

On the basis of the study presented, the following recommendations are made to the community colleges:

1. Characteristics of the student body of each school should be examined when considering curricular revisions so these revisions might best serve the needs of the individuals involved.
2. With the predictability of extra-curricular activities playing an important aspect in predicting graduation from the community college, colleges should re-evaluate their philosophy and position regarding extra-curricular activities. The finding of ways to involve more students in activities may assist in the reduction of the drop-out rate.
3. Reactions of students to quality of teaching and adequacy of education point a need for faculties to examine their concepts of the role of instructional personnel in the learning process.
4. Lack of discrimination in the development of predictions

- indicates a need for schools to review available information concerning factors influencing graduation. The development of criteria for predictions for each school might reduce this lack of discriminating power.
5. The lack of differences between community colleges concerning items related to completion of a four-year degree would indicate that four-year colleges and universities should examine closely their admission policies regarding acceptance of credit from community colleges. If attempts are made to distinguish between community colleges, perhaps a closer analysis should be made to ascertain if the differences are warranted.
 6. The low percent of students who chose to transfer and receive four-year degrees should be examined closely, both by community colleges and four-year schools. Concerted efforts to determine how the transition could be made with less "transfer shock" should be made.
 7. The differences in handling of records at the 16 community colleges should be reviewed. Follow-up information used in evaluation of programs would be more meaningful if a common base for record keeping could be established.
 8. A determination should be made as to frequency of follow-up data, i.e., three years, five years. When this is

decided, the random sample should be selected shortly after the student enrolls and followed at intervals not to exceed one year. The lack of contact for several years markedly reduces the return due to a high frequency of movement of persons in this age range. The one year suggestion would make available forwarding addresses that are dropped following a one year period.

Recommendations for Further Study

This study should be replicated to validate the procedures. Longitudinal studies involving the variables across time would prove valuable in the indications of changes in the student bodies.

An indepth study of how the various factors, especially socio-economic, affect the success in college could provide valuable information in the planning of programs for individual schools.

A similar study expanding to variables involving educational and personal aspirations, could provide another dimension to the pursuit of higher education.

The relationships of the variables to successful completion of the community college should be studied in an individual college setting. Additional variables of aspiration and major areas could possibly add to the predictability of the total group of variables.

BIBLIOGRAPHY

1. Aiken, Lewis R., Jr. The prediction of academic success and early attrition by means of a multiple choice biographical inventory. *American Educational Research Journal* 1: 127-135. 1964.
2. Association of Iowa College Presidents. Iowa college and university enrollment, fall 1970. Iowa City, Iowa, Association of Iowa College Presidents. 1970.
3. Bakrow, William. Projection of enrollments for fifty-one public and private junior and senior colleges and universities in Iowa, 1960-1970. Study No. 1 of resources and needs for higher education in Iowa. Directed by Raymond C. Gibson. Des Moines, Iowa, State House, Iowa Legislative Research Bureau. 1960.
4. Bashow, W. L. The effect of community junior colleges on the proportion of the local population who seek higher education. *Journal of Educational Research* 58: 327-329. 1965.
5. Blocker, Clyde E. The two year college: a social synthesis. Englewood Cliffs, New Jersey, Prentice-Hall, Inc. 1965.
6. Bogue, Jessie P. "Executive secretary's report". *Junior College Journal* 28: 482. 1958.
7. Bossone, Richard M. Remedial english instruction in California public junior colleges; an analysis and evaluation of current practices. Sacramento, California, California State Department of Education. (mimeo). 1966. Original not available; cited in Roueche, John E. *Salvage, redirection, or custody?* Washington D.C., American Association of Junior Colleges. 1968.
8. Bossone, Richard M. Understanding junior college students. *The Journal of Higher Education* 36: 279-283. 1965.
9. Bradley, Richard W. Increased enrollments and planning for the future. *Journal of College Student Personnel* 8: 354-359. 1967.
10. California State Department of Education, Bureau of Junior College Education. Student majors by curriculum fields and other related data in California junior colleges. Sacramento, California, the Department. 1964. Original not available; cited in Roueche, John E. *Salvage, redirection or custody?* Washington, D.C., American Association of Junior Colleges. 1968.

11. Casey, John W. An appraisal of the public community colleges in Iowa. Unpublished Ph.D. thesis. Ames, Iowa, Library, Iowa State University. 1963.
12. Clark, Burton R. The "cooling-out" function in higher education. *The American Journal of Sociology* 65: 569-576. 1960.
13. Clark, Burton R. The open door college; a case study. New York, N.Y., McGraw-Hill Book Company. 1960.
14. Cohen, Arthur M. and Brawer, Florence B. Student characteristics: personality and drop-out propensity. Washington, D.C., American Association of Junior Colleges. 1970.
15. Collins, Charles C. Critical problems of students. *Junior College Journal* 36: 32-36. 1966.
16. Cooley, William W. and Becker, Susan J. The junior college student. *Personnel and Guidance Journal* 44: 464-469. 1966.
17. Cosand, Joseph P. Philosophy of community junior colleges. *School and Community* 53: 35-41. 1966.
18. Cross, K. Patricia. The junior college student: A research description. Princeton, N.J., Educational Testing Service. 1968.
19. D'Amico, Louis A. and Bakelman, Robert W. Tuition and fee charges in public junior colleges, 1961-62. *Junior College Journal* 33: 36-39. 1962.
20. D'Amico, Louis A. and Prah, Marie R. A follow-up of the educational vocational and activity pursuits of students graduated from Flint junior college, 1953-56. *Junior College Journal* 29: 474-477. 1965.
21. Educational Policies Commission. Education of the gifted. Washington, D.C., National Education Association. 1950.
22. Faunce, Patricia. Withdrawal of academically gifted women. *Journal of College Student Personnel* 9: 171-176. 1968.
23. Field, Ralph R. The community college movement. New York, N.Y., McGraw-Hill Book Company, Inc. 1962.
24. Florida State Department of Education. The community college in Florida's future. Tallahassee, Florida, The Florida State Department of Education. 1957.

25. Florida Community Junior College Inter-institutional Research Council. Where are they now? A follow-up study of first time in college freshmen in Florida's community junior colleges in fall, 1966. Gainesville, Florida, The University of Florida. 1969.
26. Garrett, Henry E. and Woodworth, R. S. Statistics in psychology and education. New York, N.Y., Longmans, Green and Company. 1958.
27. Gibson, Raymond C. Manpower problems and higher education in Iowa, a new alliance. Study No. II of resources and needs for higher education in Iowa. Des Moines, Iowa, State House, Iowa Legislative Research Bureau. 1961.
28. Gibson, Raymond C. Projection of enrollments for fifty-one public and private junior and senior colleges and universities in Iowa, 1960-1970. Study No. 1 of resources and needs for higher education in Iowa. Des Moines, Iowa, State House, Iowa Legislative Research Bureau. 1960.
29. Gleazer, Edmund J. This is the community college. Boston, Mass., Houghton-Mifflin Company. 1968.
30. Harrington, Charles. Forecasting college performance from biographical data. Journal of College Student Personnel 10, No. 3: 156-160. 1969.
31. Heist, P. and Williams, P. Variation in achievement within a select and homogenous student body. Journal of College Personnel 3, No. 2: 50-59. 1961.
32. Hieronymus, A. N. Relationships between anxiety for education and certain socio-economic variables. Unpublished Ph.D. thesis. Iowa City, Iowa, Library, The University of Iowa. 1963.
33. Hoyt, Donald and Munday, Leo. Academic description and prediction in junior colleges. Iowa City, Iowa, American College Testing Research Report No. 10. 1966.
34. Iffert, Robert. Retention and withdrawal of college students. Washington, D.C., United States Department of Health, Education and Welfare, Office of Education. 1958.
35. Ingle, Marvin W. A survey of educational and vocational plans of eleventh-and twelfth-grade students in proposed intermediate unit # 27 of Iowa and their implications for higher education. Unpublished Ph.D. thesis. Columbia, Missouri, Library, University of Missouri. 1962.

36. Knoell, Dorthy M. A critical review of research on the college dropout. The college dropout and utilization of talent. 18: No. 5. In L. A. Pervin, L. E. Reik, and W. Dalrymple, eds. Princeton, N.Y., Princeton University Press. 1966.
37. Knoell, Dorthy M. and Medsker, Leland L. From junior college to senior college: A national study of the transfer student. Washington, D.C., American Council on Education. 1965.
38. Kruskop, LeRoy L. A skilled needs survey with implications for vocational-technical education within the Area VI Community College District. Unpublished Ph.D. thesis. Ames, Iowa, Library, Iowa State University. 1969.
39. Lagomarcino, Virgil S. An appraisal of the public junior colleges in Iowa. Unpublished Ph.D. thesis. Ames, Iowa, Library, Iowa State University. 1955.
40. Lindsay, Carl A., Marks, Edmond, and Homel, Lester. Native and transfer baccalaureate students. Journal of College Student Personnel 7, No. 1: 5-13. 1966.
41. Lins, L. J. Post-secondary educational preferences of high school seniors. Madison, Wisconsin, Coordinating Council for Higher Education. 1969.
42. Little, Kenneth. A state-wide inquiry into decisions of youth about education beyond high school. Madison, Wisconsin, University of Wisconsin, School of Education. 1958.
43. Lonning, Philip. Characteristics of full-time students enrolled in Area II and Area V Community Colleges. Unpublished Ph.D. thesis. Ames, Iowa, Library, Iowa State University. 1969.
44. Malone, Frances E. A study of students enrolled in post-high school public vocational education programs in Iowa during the 1964-65 school year. Unpublished Ph.D. thesis. Iowa City, Iowa, Library, The State University of Iowa. 1965.
45. Marsee, Stuart E. Who needs the community college. Junior College Journal 39, No. 1: 8-10. 1968.
46. Medsker, Leland L. The junior college: progress and prospect. New York, N.Y., McGraw-Hill Book Company, Inc. 1960.
47. Mellinger, M. Changing trends among public junior college student bodies. Junior College Journal 33, No. 3: 167-176. 1962.
48. Munday, Leo. A comparison of junior college students in transfer and terminal curricula. Journal of College Student Personnel 9, No. 5: 325-329. 1968.

49. O'Connor, Thomas J. Follow-up studies on junior colleges; a tool for institutional improvement. Washington, D.C., American Association of Junior Colleges. 1965
50. Orange Coast Junior College District. Withdrawal survey data for spring semester 1968. Costa Mesa, California, Orange Coast Junior College District. 1968.
51. Pervin, Lawrence, Reik, Louis, and Dalrymple, Willard, The college dropout and the utilization of talent. Princeton, N.J., Princeton University Press. 1966.
52. Richards, James M. and Braskamp, Larry. Who goes where to college? Iowa City, Iowa, American College Testing Research Report No. 20. 1967.
53. Richards, James M., Rand, Loraine M., and Rand, Leonard P. A description of junior colleges. Iowa City, Iowa, American College Testing Research Report No. 5. 1965.
54. Richardson, Richard C. and Blocker, Clyde. Students guide to the two-year college. Englewood Cliffs, New Jersey, Prentice Hall, Inc. 1968.
55. Rose, Harriett A. Prediction and prevention of freshman attrition. Journal of Counseling Psychology 12, No. 4: 399-403. 1965.
56. Roueche, John. Salvage, redirection or custody? Remedial education in the community college. Washington, D.C., American Association of Junior Colleges. 1968.
57. Rudolph, F. The American college and university. New York, N.Y., Knopf. 1962.
58. Schenz, Robert. An investigation of junior college courses and curricula for students with low ability. Unpublished Ph.D. thesis. Los Angeles, University of California, School of Education. 1963.
59. Schroeder, Wayne L. and Sledge, George W. Factors related to collegiate academic success. Journal of College Student Personnel 7: 97-103. 1966.
60. Sexton, Virginia Staudt. Factors contributing to attrition in college populations; twenty-five years of research. Journal of General Psychology 72: 301-326. 1965.

61. Snedecor, G. W. and Cochran, W. G. Statistical methods. 6th ed. Ames, Iowa, Iowa State University Press. 1967.
62. Speigel, Murray R. Theory and problems of statistics. New York, N.Y., Schaum Publishing Company. 1961.
63. System Scientific Subroutine package. Version III, Application descriptions. White Plains, New York, International Business Machines Corporation. 52-55. 1968.
64. Thorton, James W. The community junior college. New York, N.Y., John Wiley and Sons, Inc. 1960.
65. Trent, J. W. and Medsker, L. L. Beyond high school. San Francisco, California, Jossey-Bass, Inc. 1968.
66. U.S. Department of Commerce, Bureau of Census. Historical Statistics of the United States Colonial Treas. to 1957. Washington D.C., U.S. Government Printing Office. 1961.
67. U.S. Department of Labor. Manpower report of the president and a report on manpower requirements, resources, utilization, and training. Washington, D.C., U.S. Government Printing Office. 1965.
68. U.S. Office of Education, Department of Health, Education and Welfare. Digest of educational statistics, 1966. Washington, D.C., U.S. Government Printing Office. 1966.
69. U.S. Office of Education, Department of Health, Education and Welfare. Projections of educational statistics to 1977-78, 1968. Washington, D.C., U.S. Government Printing Office. 1968.
70. Wert, James E., Ahmann, J. and Neidt, Charles O. Statistical methods in education and psychological research. New York, N.Y., Appleton-Century-Crofts, Inc. 1954.

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Recognition is given to the many people who have contributed to the successful completion of this study, with a special acknowledgment to the members of my graduate committee: Dr. Ray Bryan, Professor Clarence Bundy, Dr. Harold Davey and Dr. Robert Crom.

A thank you is extended to the directors of student services of the Iowa area community colleges for their assistance in securing the needed information.

A special appreciation is extended to my wife, Carol, for her patience, understanding, and assistance during the course of this study.

APPENDIX

January 19, 1971

TO: Directors of Student Personnel
FROM: Don Fleming, Marshalltown Community College
RE: Iowa Community College Follow-up

Enclosed are the information sheets for the follow-up study of Arts and Science students. The sample selection is to be made on the basis of the attached set of random numbers. The three digit number in the right-hand column represents the random numbers of folders you are to select from an alphabetic listing of first-time, full-time, Arts and Science students who entered your institution in the fall of 1966. The selection is based on the numbers you submitted some time ago.

We would appreciate anything you can do to expedite the completion of these forms. We're hoping for return by the middle of February. If you could bring what you have completed to the February 5 meeting at Des Moines it would be appreciated.

If you have questions feel free to contact me.

Donald Fleming

IOWA COMMUNITY COLLEGE RESEARCH PROGRAM

Instruction for completion of Student Information Form.

1. Name----- Last Name, First Name, if married name is known, please indicate.
2. Address----- We want the address where we will be most likely to reach the individual. If current address is unknown, use parent name and address. If you are sure of the current address, omit parent name and address.
3. Transfer Institution ---- Indicate where transcripts have been sent. Use additional space as necessary.
4. Items 11 - 15---- High School Rank and Size. Please complete as accurately as possible. (Use 0, in front if necessary, i.e. 0025).
5. Items 19 - 27---- Use ACT Standard Scores.
6. Item 29---- Number of semesters completed. (Use 0 on left if necessary, i.e. 035).
7. Item 31---- Number of semester hours of credit earned. (Use 0 on left if necessary, i.e. 035).
8. Item 34---- Number of semester hours of credit completed during fall semester 1966.
9. Item 36 - 39---- Note decimal point on GPA.
10. Item 42---- Status on leaving the institution.
11. Item 43---- Did the person receive a degree.

IOWA COMMUNITY COLLEGE FOLLOW-UP

--	--

Name - First

--	--	--

City

State

Zip

--	--

Address

City

--	--

Zip

Transfer Institutions Name
(If Available)

--	--	--	--

School Class
ze Number

(19) (21) (23) (25) (27)
Eng. Math S.S. N. Sc. Comp.
ACT Standard Scores

(29) (31)
Sem. Credit
Completed Earned

(34)
Sem. Ho
Carried
Enrollm

--

(42)

Status

1. Good Stand
2. Probation
3. Dismissal

--

(43)

Community College Degree

1. Yes
2. No

--

(44)

Sex

1. Male
2. Female

Don Fleming, Coordinator
Marshalltown Community College
113 North First Avenue
Marshalltown, Iowa 50158

Dear Former Community College Student:

We need your help.

The community colleges of Iowa in cooperation with the Iowa State Department of Public Instruction and Iowa State University are conducting a follow-up of former students who entered one of Iowa's sixteen community colleges in the fall of 1966. The purpose of the study is to provide information regarding the community colleges of Iowa on a State wide basis.

We would appreciate you completing the attached questionnaire and return it in the envelope provided. No postage is necessary.

Since a small sample of former students is being used for the study, it is important we obtain as large a return as possible to provide an accurate picture.

Please be assured the information in the questionnaire will not be used with your name. We are compiling the information for statistical purposes only and individuals will not be identified. All replies are confidential.

Would you take a few minutes of your time and complete the questionnaire and mail it today.

Thanking you in advance for your help and consideration.

Sincerely,

Donald A. Fleming
Project Coordinator

DAF/dfw

Enclosures

IOWA COMMUNITY COLLEGE RESEARCH PROJECT
FORMER STUDENT INFORMATION FORM

Note: Your answers to these questions will be held strictly confidential. They will be used for statistical purposes only.

Name _____ Phone _____
last first middle or maiden area

Address _____
city state zip

(7-10)

Student I.D. No. _____

- I. On the following items, please react as you feel you would have reacted while attending community college.

(11-12)

1. What factor influenced you most in your attendance at community college? (Check one).

- 1. Suggestion of family
- 2. Advice of teachers or counselors
- 3. Attendance of close friends
- 4. Need for better job preparation
- 5. College attendance taken for granted
- 6. Desire to defer military service
- 7. Had nothing better to do
- 8. Desire for more education
- 9. Low cost
- 10. Quality program
- 11. Other (list) _____

(13)

2. Please estimate the annual family income when you entered community college.

- 1. Less than \$ 2,499
- 2. \$ 2,500 - \$ 4,999
- 3. \$ 5,000 - \$ 7,499
- 4. \$ 7,500 - \$ 9,999
- 5. \$10,000 - \$12,499
- 6. \$12,500 - \$14,499
- 7. Over

(14)

3. Education level of father when you entered community college (highest level)

- 1. Elementary
- 2. High school (didn't graduate)
- 3. High school (graduate)
- 4. College
- 5. College graduate
- 6. Professional school

(15)

4. Educational level of mother when you entered community college (highest level)

- 1. Elementary
- 2. High school (didn't graduate)
- 3. High school (graduate)
- 4. College
- 5. College graduate
- 6. Professional school

(16)

5. Distance traveled daily going to and from community college.

- 1. Less than 1 mile
- 2. 11 - 9 miles
- 3. 10 - 19 miles
- 4. Over 20 miles

(17)

6. Distance from home to community college.
(one way)

- 1. Under 20 miles
- 2. 20-39 miles
- 3. 40-59 miles
- 4. 60-79 miles
- 5. Over 80 miles

(18)

7. Type of housing while attending community college.

- 1. Lived at home or had own home
- 2. Rented room or apartment
- 3. Lived in dormitory

(19)

8. Martial status while in community college.

- 1. Married
- 2. Single

(20)

9. Extra curricular activities while in the community college. (check one)

- 1. Intercollegiate athletics
- 2. Intramural athletics
- 3. Music and drama
- 4. Student government
- 5. College wide clubs
- 6. Departmental clubs
- 7. Other _____
- 8. None

(21)

10. Estimate the percent of your total community college expenses you earned.

- 1. 0 - 24 percent
- 2. 25 - 49 percent
- 3. 50 - 75 percent
- 4. 75 - 100 percent

(22)

11. Estimate the number of hours per week you worked while attending the community college.

- 1. None
- 2. 1 - 9 hours
- 3. 10 - 19 hours
- 4. 20 - 29 hours
- 5. 30 - 39 hours
- 6. Over 40 hours

II. Please react to the following items as you view your situation at the present time. (Check the most important ONE)

(23-24)

12. Why did you leave the community college?

- 1. Completed program and/or graduated
- 2. Dissatisfaction with college
- 3. Financial reasons
- 4. Draft status
- 5. Health reasons
- 6. Work reasons
- 7. Lack of time
- 8. Inability to get desired classes
- 9. Transfer to another school
- 10. Poor counseling
- 11. Poor teaching
- 12. Limited curriculum

(25)

13. Looking back at your community college experience, how would you rate the difficulty of courses?

- 1. Too difficult and demanding
- 2. Adequate
- 3. Too easy

(26)

14. How would you rate the teaching?

- 1. Excellent
- 2. Good
- 3. Fair
- 4. Poor

(27)

15. Did you transfer to a four-year college or university?

- 1. Yes
- 2. No

Name of college

Address

(28-30)

If more than one please check and list on the last page.

(31)

16. Have you received a bachelor's degree?

1. Yes
 2. No

(32)

17. Are you currently attending college?

1. No
 2. Yes - Fulltime (12 or more hr)
 3. Yes - Parttime (11 or less hr)

(33)

18. Classification

1. Freshman
 2. Sophomore
 3. Junior
 4. Senior
 5. Graduate
 6. Special

(34)

19. Are you working toward a graduate degree?

1. Yes
 2. No

(35)

20. Are you employed full-time?

1. Yes
 2. No

(36-39)

Job Title _____

(40)

21. Are you in the armed services?

1. No
 2. Yes - active duty
 3. Yes - reserve unit
 4. Yes - National Guard

(41)

22. Are you a veteran of the armed services?

- 1. No
- 2. Army
- 3. Navy
- 4. Air Force
- 5. Marines
- 6. Coast Guard

(42)

23. Are you receiving or have received training other than at a college or university? (Include service schools)

- 1. Yes
- 2. No

(43-46)

Name of school _____
Address _____

(47-48)

Type of training _____

(49)

24. If your answer to 15 was no please answer this question.
(Please check most likely)

- 1. I plan to go back to community college and complete.
- 2. I plan to go to a four year college and complete.
- 3. I am uncertain now about further college plans.
- 4. I have given up further college plans.
- 5. Other (Please explain).

(50)

25. If you have given up further college plans, please check the one most important reason below which was the cause of your decision. (Indicate the most important ONE)

- 1. Community college was too difficult.
 - 2. College work was not suited to my needs.
 - 3. I was not challenged by community college work.
 - 4. Economic reasons.
 - 5. I was drafted into the armed services.
 - 6. I volunteered for the armed services.
 - 7. I wanted to seek immediate employment.
 - 8. I became ill or injured.
 - 9. Other. Please explain _____
-

(51)

26. What is, in your opinion, the value of the education you received while attending community college? Please answer this question, relating the value of community college in helping you in your present education, employment or other value.

- 1. Community college was extremely helpful.
- 2. Community college was moderately helpful.
- 3. Community college was helpful.
- 4. Community college was of little help.
- 5. Community college was of no help at all.

(52-54)

27. What is your present occupation?
-

(55)

28. How long have you been employed in your present position?

- 1. Less than 12 months
- 2. 12-23 months
- 3. 24-35 months
- 4. 36-47 months
- 5. Over 48 months

(56)

29. If full-time employment, what is your present salary range?

- 1. Less than \$ 2,499
- 2. \$ 2,500 to \$ 4,999
- 3. \$ 5,000 to \$ 7,499
- 4. \$ 7,500 to \$ 9,999
- 5. \$10,000 to \$12,499
- 6. \$12,500 to \$14,999
- 7. Over \$15,000

(57)

30. How many years were you employed full-time prior to entering community college?

- 1. Less than 12 months.
- 2. 12-23 months
- 3. 24-47 months
- 4. Over 48 months

(58)

31. Age when you entered the community college.

THANK YOU FOR YOUR CONSIDERATION

Don Fleming, Coordinator
Marshalltown Community College
113 North First Avenue
Marshalltown, Iowa 50158

Dear Former Community College Student:

A few weeks ago you received a questionnaire regarding your experiences at the community college. In the event this was lost we are enclosing another copy.

The purpose of the study is to provide information concerning the community colleges of Iowa on a state wide basis.

We would appreciate your completing the attached questionnaire and return it in the envelope provided. No postage is necessary.

Since a small sample of former students is being used for the study, it is important we obtain as large a return as possible to provide an accurate picture.

Please be assured the information in the questionnaire will not be used with your name. We are compiling the information for statistical purposes only and individuals will not be identified. All replies are confidential.

Would you take a few minutes of your time and complete the questionnaire and mail it today.

Thanking you in advance for your help and consideration.

Sincerely,

Donald A. Fleming
Project Coordinator

DAF/dfw

Enclosure

IOWA COMMUNITY COLLEGE RESEARCH PROJECT

Don Fleming, Coordinator
Marshalltown Community College
113 North First Avenue
Marshalltown, Iowa 50158

Dear Former Community College Student:

We are in the final stages of the Iowa Follow-up of Community College students. We are in need of the information on the following page to complete the study.

We would appreciate your permission to obtain this information from the school to which you transferred. Please sign the enclosed release form and forward it to your transfer school in the enclosed envelope.

Please be assured the information will be used for statistical purposes only and your name will not be used.

Thank you for your help and consideration.

Sincerely,

Donald A. Fleming
Project Coordinator

DAF/yz

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IOWA COMMUNITY COLLEGE RESEARCH PROJECT

Don Fleming, Coordinator
 Marshalltown Community College
 113 North First Avenue
 Marshalltown, Iowa, 50158

I authorize the release of the following information to the Iowa
 Community College Research Project.

 Signature

Name _____

Card No. _____

I.D. No. _____

Sem. Hrs. earned at transfer institution _____

Number of semesters attended _____

Cumulative Grade point average at transfer institution _____

Present Status: _____

- 1) Graduate
- 2) Dropped
- 3) Dismissed
- 4) Enrolled
- 5) Transferred

Note to Transfer Institution

Please return to:

Mr. Chuck Moench
 Area Schools Branch
 Iowa Department of Public Instruction
 Des Moines, Iowa

June 18, 1971

The State Department of Public Instruction in cooperation with Mr. Donald Flemming, Assistant Dean of Marshalltown Community College, is presently conducting a state-wide follow-up of students formerly enrolled in the college parallel divisions of area schools in Iowa. This follow-up is a research project which is intended to provide the Department of Public Instruction with further information on the progress of students toward a baccalaureate degree. This information will be used in future planning for area schools and will be made available to other interested individuals and agencies in Iowa.

We are requesting your cooperation in providing information on a limited number of students who formerly attended Iowa's area schools and who transferred to your institution. These students have been selected by sampling procedure and will be used as the core of this follow-up study. We sincerely hope you will take time away from your already busy schedule to provide this information which is essential for our state-wide follow-up.

A separate Transfer Institution Information sheet has been prepared for each student on which follow-up information is to be collected. You are requested to complete the six items of information which have not already been completed on this information sheet. If for some reason you are unable to identify in your records any of these students, please return the Transfer Institution Information sheet to our office and we will attempt to gather additional information to more accurately identify the student; we anticipate some problems with identification due to such factors as marriage.

The information being collected will be used for statistical purposes only. No information will be released at any time on individual students and the results of the study will be presented in terms of total students without any effort at identifying a particular student. The students included in this follow-up are entering freshmen in the fall 1966 class of area schools.

You are requested to complete the individual Transfer Institution Information sheets on individual students according to the instructions contained on the enclosed Instructions sheet. The Instructions sheet should also be completed by identifying the credit hours as either semester or quarter hours and the type of institution that is reporting.

We would very much appreciate receiving this information by July 15 if this is at all possible since we have scheduled computer time and it would be most beneficial if we could process all information at the same time.

Your cooperation in this endeavor is greatly appreciated. If you have any questions concerning this study, please feel free to contact the Area Schools Division of the Iowa State Department of Public Instruction at your earliest convenience.

All information should be mailed directly to the Area Schools Division, State Department of Public Instruction at the Grimes State Office Building, East 14th and Grand Avenue, Des Moines, Iowa 50319.

Sincerely,

Charles R. Moench, Director
Area Schools Division

CRM/mlc

Enclosure

