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A HISTORICAL STUDY OF DEGREE STUDENTS GRADUATING FROM SURRY COMMUNITY COLLEGE FROM 1966-1976 WITH EMPHASIS ON SUBSEQUENT EDUCATIONAL EXPERIENCES OF COLLEGE TRANSFER STUDENTS AND EDUCATIONAL EXPERIENCES, GEOGRAPHIC MOBILITY, AND ECONOMIC STATUS OF TECHNICAL-VOCATIONAL STUDENTS.

The University of North Carolina at Greensboro,
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A HISTORICAL STUDY OF DEGREE STUDENTS GRADUATING FROM SURRY
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STATUS OF TECHNICAL-VOCATIONAL STUDENTS

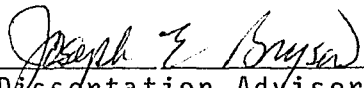
by

JAMES M. REEVES

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
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of the Requirements for the Degree
Doctor of Education

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Approved by


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REEVES, JAMES M. A Historical Study of Degree Students Graduating from Surry Community College from 1966-1976 with Emphasis on Subsequent Educational Experiences of College Transfer Students and Educational Experiences, Geographic Mobility, and Economic Status of Technical-Vocational Students. Directed by: Dr. Joseph E. Bryson (1977)

Although the benefits derived from an educational investment have long been thought to be positive, only in recent years have attempts been made to evaluate these benefits. The need for quantitative measures of the return derived from investments in human capital have become increasingly important as the public requires greater accountability for its educational expenditures. The purpose of this study was to evaluate the pecuniary benefits accruing to the individual as a result of investments in education at the community college and technical institute level, especially in regard to Surry Community College. The study design focused on five major objectives: (1) to determine the scope and type of formal educational activities that have taken place after completion of the technical-vocational program at Surry Community College; (2) to determine if students moved to the Surry Community College area in order to enroll in a particular technical-vocational curriculum; (3) to determine if students moved from the Surry Community College area after attaining a degree in the technical-vocational curriculum at Surry

Community College; (4) to describe the economic status of graduates of technical-vocational programs as revealed by the graduates; and (5) to determine the academic success after transfer of college parallel students.

The data used in this study were derived from a mail survey of all graduates of the nine different curricular fields at Surry Community College. Questionnaires were sent to 347 college parallel graduates and to 497 technical-vocational graduates. Follow-up letters were sent until a return rate of 53 percent was attained for technical-vocational graduates and 77 percent for college parallel graduates.

The findings of this study revealed that the overwhelming majority of Surry Community College graduates in technical-vocational programs entered full-time employment rather than a full-time educational program. The fact that graduates from some of the engineering programs, who have better opportunities for advanced studies because of the development of Bachelor of Technology degree programs at area four-year institutions, indicates that graduates do not necessarily perceive that two years is the optimum time for a technical-vocational program.

Surry Community College attracts students predominantly from within its geographic region. A very small number of students moved to the Surry Community College geographic area in order to participate in a technical-vocational program. Of the ninety graduates who left the

Surry Community College geographic area, 37.7 percent moved for better employment.

It was found that 94 percent of Surry Community College graduates received the Bachelor's degree after transferring to a four-year institution. This study also found that only thirty-six graduates, 20 percent, took more than two years to graduate. Surry Community College graduates reported their quality point averages as being above the 3.00 level in six of the eight years surveyed. Finally, the graduates gave Surry Community College an excellent rating in preparing Surry Community College students for transferring to a four-year institution.

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The writer wishes to express his sincere appreciation to the many persons whose assistance and cooperation made this study possible. The successful completion of this research would not have been possible without the dedicated efforts of many persons.

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The constant encouragement and support of my parents who instilled in me a desire to learn and achieve to the best of my ability in all my endeavors throughout the years has become a source of strength and inspiration. The memory of my father, John W. Reeves, a man dedicated to making life better for others, has given me a source of inspiration and a standard for emulation.

I will never be able to adequately express my gratitude to my wife, Gayle, and my children, Leigh Ann, Mary Beth, and Jayme Gale, whose understanding, constant love and support and continued encouragement made it all possible.

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Chapter I

THE PROBLEM AND PROCEDURES

STATEMENT OF THE PROBLEM

This is a historical study of selected post-community college activities of graduates of technical, vocational, and college parallel programs at Surry Community College in Dobson, North Carolina. This research describes the amount and type of post-community college formal education, the economic status as revealed by the graduates, the geographic mobility of the technical-vocational graduates, and the academic success after transfer of the college parallel graduates.

SIGNIFICANCE OF THE STUDY

The concept of junior and community college education in the United States developed in response to a variety of evolving educational needs. These needs included: (1) preparing students for upper division work at colleges and universities, (2) training students in two-year programs for employment in occupational areas, (3) training mature

students through continuing education, and (4) community service.¹

North Carolina's attempt to meet these needs was mandated by state legislation. In 1957 both houses of the General Assembly, with virtually no opposition, passed the Community College Act. This act provided funds only for the academic programs of the state's two-year colleges. Money was appropriated on the basis of a specified sum per student quarter hour of instruction. The curriculums consisted of courses at the freshman and sophomore levels in liberal arts and sciences.²

The specific purposes of the community college system are stated in the 1964 General Statutes of North Carolina. The Statement of Purpose for the North Carolina Community College and Technical Institute System as stated in the General Statutes is as follows:

The purposes of this Chapter are to provide for the establishment, organization, and administration of a system of educational institutions throughout the state offering courses of instruction in one or more of the general areas of two-year college parallel, technical, vocational, and adult education programs, to serve as a legislative charter for such institutions, and to authorize the support thereof. The major purpose of each and every institution operating under the

¹Leland L. Medsker and Dale Tilley, Breaking the Access Barriers (New York: McGraw-Hill, 1971), pp. 13-16. (Hereinafter cited as Medsker and Tilley, Barriers.)

²Kayon Bertel Segner, III, A History of the Community College Movement in North Carolina (Raleigh: North Carolina State University, 1974), pp. 21-22. (Hereinafter cited as Segner, Community College Movement.)

provisions of this Chapter, shall be and shall continue to be the offering of vocational and technical education and training, and of basic high school level, academic education needed in order to profit from vocational and technical education for students who are high school graduates or who are beyond the compulsory age limit of the public school system and who have left the public schools.³

It has been said that North Carolina not only had a more severe need for community colleges than some other states but that it also was slowest in developing them.⁴

There were many reports, committees, and commissions involved in the development of community and junior colleges prior to and following the Community College Act of 1957.

The first efforts made to develop a community college system in North Carolina were by State Superintendent, Clyde Erwin. After attempting to secure community college legislation in 1949, he appointed a state committee to make recommendations to the 1953 General Assembly. The committee, headed by Dr. Allan Hurlburt, published its Community College Study in late 1952. This document recommended that the state adopt a system of comprehensive community colleges. These were to be low tuition and "open door" colleges.⁵

³North Carolina General Statutes 1964, Ch. 115A, Art. 1, p. 850.

⁴Howard M. Boozer, "North Carolina is Counting on Community Colleges," Junior College Journal, XXXIV (November, 1963), p. 8.

⁵Allan S. Hurlburt, Community College Study, State Department of Public Instruction, Publication No. 285, October 1952, Raleigh, North Carolina, pp. 7-10.

The culminating point in the development of a comprehensive community college system in North Carolina was the appointment by the Governor in 1961 of a commission to study education beyond the high school. Attorney Irving Carlyle of Winston-Salem was named chairman of this group and it was commonly referred to as the "Carlyle Commission." The Carlyle Commission published its final report in December 1962. The Commission advocated a statewide system of comprehensive institutions that was to be administered by the State Board of Education. In May 1963, the General Assembly passed the Omnibus Higher Education Act. This legislation included the community college recommendations of the Carlyle Commission.⁶

One measure of the success of the legislation is found in the statistics on North Carolina community colleges. The North Carolina enrollment in curriculum programs has grown from approximately 50,000 in 1966 to approximately 150,000 in 1972 with 12 percent of the enrollment in college parallel, 47 percent in technical programs, 20 percent in vocational programs, and 21 percent in diploma programs.⁷

Long before the publication of the Carlyle Report, citizens of Surry County became interested in establishing a community college in the area. In 1960, the Mount Airy

⁶Segner, Community College Movement, pp. 132-135.

⁷North Carolina Atlas (Chapel Hill: University of North Carolina Press, 1974), p. 226.

Lions Club appointed a committee of five members to study the possibilities and to communicate with the Division of Higher Education in Raleigh. In 1962 the committee was expanded to include all major civic groups in the county. Local newspaper and radio stations endorsed the project and expressed wholehearted approval. By May 1963, interest in a community college had reached such a point that a county-wide meeting was held in Dobson to discuss procedural steps. Following the meeting, the Surry County Board of Commissioners and the Board of Education of the Elkin City Schools, the Mount Airy City Schools, and the Surry County Schools endorsed the community college project. Steps were taken to initiate a county-wide study.⁸

The Surry County Board of Commissioners appointed a Community College Steering Committee on August 5, 1963, composed of fourteen members. The Committee voted unanimously to authorize a county survey to submit to the County Commissioners. The application was approved by local government officials and was submitted to the State Board of Education at the December 1963 meeting to request a comprehensive community college for Surry County. The application was approved by the State Board of Education on January 19, 1964.⁹ In 1964 Surry Community College was

⁸Community College Survey, Surry County, 1963, pp. 2-3.

⁹Minutes of the Board of Trustees of Surry Community College, March 10, 1966, Vol. I, 1963-1968.

established as a two-year community college under Chapter 115A of the General Statutes of North Carolina.¹⁰

According to the Surry Community College Handbook, the citizens of Surry County approved a \$500,000.00 bond issue and a tax authorization of four cents in 1964. In September 1972, another bond issue was authorized by the voters in the amount of \$1,000,000.00. On November 2, 1964, Mr. I. John Krepick was elected President of Surry Community College. The college facilities are located in Dobson, North Carolina. Presently six major structures constitute the campus--a science-technical building, a shop building, a learning resources building, a physical education building, a classroom building, and a vocational-technical building. Surry Community College is accredited by the Southern Association of Colleges and Schools and by the North Carolina State Board of Education. The college is a member of the American Association of Junior and Community Colleges, the Southern Association of Junior Colleges, and the North Carolina Association of Junior Colleges and Universities.¹¹

Surry Community College makes the following statement relative to its purposes. In keeping with the State's purposes, Surry Community College exists in the belief that

¹⁰ Surry Community College Handbook, Vol. VII, 1975-1976, p. 6.

¹¹ Ibid.

each person should have the opportunity to reach his full potential within society. The college assumes its responsibility to:

- provide, through the open-door admissions policy, educational opportunities for all interested citizens in the area.
- provide vocational and technical programs appropriate to the needs of industry and business in the area.
- provide students who plan to transfer to other institutions with two years of quality credit courses.
- provide continuing educational programs and courses for groups who desire to develop certain basic technical or educational skills in order to enrich their personal and cultural lives or to improve their personal efficiency.
- provide activities to foster responsible citizenship and cultural enrichment, encourage community leadership, and cooperate with community leaders to enhance our area.
- provide operational information to county commissioners, officials, and taxpayers as needed and/or requested.¹²

Surry Community College has grown from a full-time equivalent enrollment of 220 in the fall of 1966 to 1,159 in the fall of 1975.¹³

The educational leaders who developed the recommendations for the North Carolina Community College System had access to the latest thinking regarding the purposes for post-secondary education. These purposes were incorporated

¹² Ibid., p. 5.

¹³ North Carolina Department of Community Colleges, Quarterly Enrollment Report, Fall 1975-1976, p. 26.

into statements regarding technical-vocational and college parallel education as outlined in the statutes regarding the community college system for North Carolina. Analysis of the quotations from the North Carolina Legislature and from the statement of purposes from the Surry Community College Handbook reveal four assumptions (written or implied) about this type of education. There is an implication that the community and the graduates benefit economically through employment of the skills gained in the program. Other assumptions are the terms "area," which implies that students come from within the Surry Community College geographic area, "two-year," which implies that two years is the optimum time for technical-vocational education, and "quality credit courses for transfer," which implies that colleges will offer quality credit for transferring to four-year institutions. This research will test the validity of these assumptions as they have operated in the post-community college programs at Surry Community College.

Economic status will be described by analyzing the beginning and present salaries, type of salary structure, and advancement on-the-job of technical-vocational graduates. The term "area" implies that students are drawn from a local geographic area and return, upon graduation, to the same area. The research will test the validity of this assumption by measuring the mobility of the technical-vocational graduates both to and from the Surry Community

College geographic area. The phrase "two-year" implies that two years is the optimum time period for technical-vocational programs. The research will measure the validity of this assumption by analyzing the post-community college formal educational activities of the graduates of Surry Community College technical-vocational programs. The phrase "two years of quality credit courses" implies that students will receive quality education which will permit them to be successful at the institution to which they transfer. This research will test the validity of this assumption by analyzing the post-community college activities of the college parallel graduates in terms of cumulative quality points earned, degrees received, and the attrition rates of Surry Community College students after they transfer.

This research is significant because it measures the results of the efforts made at Surry Community College to satisfy its legal obligation regarding the purposes of technical-vocational and college parallel education. Further, the information this study generates could modify individual and institutional attitudes toward technical-vocational education at Surry Community College and similar institutions. Finally, this research is significant because it can be used as a model for other institutions which desire to study their purposes and objectives.

CONCEPTUAL FRAMEWORK

Definitions

Area. This word refers to a geographical region comprising a fifty-mile radius of Surry Community College.

Technical-vocational. This term refers to a type of post-high school educational program offered by community and junior colleges and technical institutions. Completion of this type of program implies qualification of the student for immediate employment. Synonymous terms are terminal, paraprofessional, and semi-professional.

Transfer program. This term refers to a junior college program that will transfer for comparable credit at the upper division universities. Synonymous terms are college parallel, liberal arts, and college transfer.

Specific Objectives

The specific objectives of this study are:

1. To determine the scope and type of formal educational activities that have taken place after completion of the technical-vocational program at Surry Community College.
2. To determine if students moved to the Surry Community College area in order to enroll in a particular technical-vocational curriculum.

3. To determine if students moved from the Surry Community College area after attaining a degree in the technical-vocational curriculum at Surry Community College.

4. To describe the economic success of graduates of technical-vocational programs as revealed by the graduates.

5. To determine the academic success after transfer of college parallel graduates.

RELATED RESEARCH

In reviewing related research, there is a lack of research on graduates of junior colleges and community technical-vocational programs. This is particularly true when compared with the amount of research on graduates of transfer programs.

A search revealed seventeen dissertations containing key words relating to this dissertation, written between 1949 and 1975. September issues of the Junior and Community College Journal list dissertations recently completed. Reference was made to them in an effort to find other related research. The writer also referred to The Education Index and to Dissertation Abstracts. A limited amount of research was found regarding geographic mobility and economic success of graduates of technical-vocational programs.

An analysis of a follow-up study of occupational graduates by Cheatham reveals that two-thirds of the

enrollment came from within the local school districts.¹⁴ Similar conclusions can be drawn from a study by Larson. He found that 54 percent of the population he studied were residents of the local district and that 72 percent found employment within fifty miles of the college attended.¹⁵ Neither of these writers made any mention of the sizable remainder of their population who did not come from or return to the local area being served by the school. The implications or impact of inward or outward mobility was not mentioned. Becker's study indicated a mobility to other geographic areas. Only a relatively small number of employees in the local area studied were junior college graduates.¹⁶

Bates conducted a study to determine the relationships of selected variables to interstate geographic mobility of technical graduates of associate degree programs in Oklahoma. An analysis of this study revealed that a

¹⁴Orie A. Cheatham, The Junior College Movement with Emphasis on a Follow-up Study (Terminal Students Graduated from Selected Missouri Junior Colleges to Determine the Relationship between Their College Training Program and Their Present Occupation) (Iowa City: State University of Iowa, 1962), p. 27.

¹⁵Milton E. Larson, A Study of the Characteristics of Students, Teachers, and the Curriculum of Industrial Technical Education in the Public Community Junior College of Michigan (East Lansing: Michigan State University of Agriculture and Applied Science, 1965), p. 14.

¹⁶Charles Becker, The Adequacy of Selected Technical-Vocational Curriculums of Five Junior Colleges in North-East Texas (Commerce, Texas: East Texas State University, 1967), p. 37.

a movement away from the state of Oklahoma was influenced by a series of factors, both personal and economic.¹⁷

Terminal students earned higher pay in their first job when compared with transfer students. After three years, the pay for terminal and transfer students was almost equal. These were some findings revealed in a study by Matterson.¹⁸

Related readings that dealt with post-junior college education were found as minor parts of some larger research efforts. Brown mentioned the factors that motivated further education. He did not measure specific amounts of post-junior college education attained by the persons being studied. Brown referred to the low prestige image of occupational education as a factor in students seeking further education.¹⁹

Approximately 20 percent of the persons studied by Davidson continued their education after receiving Associate

¹⁷Wilfred M. Bates, An Examination of Relationships of Selected Variables to Interstate Geographic Mobility of Technical Graduates of Associate Degree Programs in Oklahoma (Norman: University of Oklahoma Press, 1969), p. 17.

¹⁸Richard V. Matterson, The Relationship of Junior College Programs to Employment Experiences of Graduates (Berkeley: University of California Press, 1966), p. 42.

¹⁹Milton D. Brown, A Comparative Study of Attitudes and Opinions among Selected Groups in Two Michigan Cities with Authoritative Judgment Concerning Occupational and Technical Education in Community Colleges (Lansing: University of Michigan Press, 1964), pp. 28-29.

degrees in the occupational field. About 40 percent of these expressed an intent to continue their education.²⁰

As previously stated, there was ample research dealing with the college-transfer students' success after graduation from the two-year college. James H. Nelson in the National Educational Association Journal, October 1965, summarized a notable research project conducted by Knoell and Medsker. In 1957-1958, a joint committee of the American Association of Collegiate Registrars and Admissions Officers conducted a survey of current articulation policies and procedures in a selected group of institutions. On the basis of the findings, the committee recommended making a thorough follow-up investigation of junior college transfers. This study became known as the Knoell-Medsker study and was carried out from 1961 through 1964. This study involved more than 7,000 transfers from 345 junior colleges. Included for comparison were an additional 3,352 "native" students, who had taken all of their college work in senior institutions and 1,181 junior college students who transferred before 1960. The forty-one four-year colleges and universities which were located in ten different states were selected to provide a national picture of the characteristics, problems, and programs of junior college transfer students.

²⁰John E. Davidson, Junior College Terminal Graduates and Junior College Goals (Buffalo, State University of New York, 1968), p. 21.

This study focused on several key questions. How well prepared were these transfer students for the competition they encountered in senior colleges? Were they as successful as students who entered four-year institutions directly from high school? Perhaps the most basic consideration was the transferability of credit received in junior colleges. Data from 95 percent of the students indicated that less than 15 percent of the transfers reported loss of credit as a serious problem and nearly one-half (43 percent) said they lost no credit in transferring.²¹ When asked if they encountered difficulty meeting standards and academic requirements in their first year after transfer, about 80 percent said they did not.²² Similarly, student evaluations of their junior college instruction, counseling, and advising were favorable, although less favorable for counseling and advising than for instruction.²³ Comparison of grades earned by junior college transfers with those of native students revealed that students while in junior colleges had a slightly higher grade-point average than native freshmen and sophomores. In the upper division, however, this difference was reversed, with native students

²¹James H. Nelson, "Do Junior College Transfers Make the Grade?" National Educational Association Journal, October 1965, p. 55. (Hereinafter cited as Nelson, "Do Transfers Make the Grade?")

²²Ibid.

²³Ibid., p. 56.

earning a slightly higher grade-point average.²⁴ Finally, according to this study, one may view the effectiveness of junior college preparation in terms of how successfully it leads to the bachelor's degree. The important question is, what percentage of junior college transfer students graduate from senior institutions? Because many of the transfer students were still in college when the study was completed, the percentage graduated was estimated. A projection indicated that 75 to 80 percent of them would ultimately attain the bachelor's degree. Of the remainder, less than one-half had been dismissed for scholastic reasons.²⁵

This study concluded that the junior colleges do a good job of preparing their students for degree programs at senior colleges. The cumulative average at the four-year colleges for the entire group of transfer students was found to be 2.34 or C+, compared with a cumulative junior college average of 2.56.²⁶

Bird reported on a number of studies on the performance and retention of transfer students. It appears that his general conclusions were favorable to the junior college transfer.²⁷ Wall, reporting on the performance

²⁴Nelson, "Do Transfers Make the Grade?" p. 56.

²⁵Ibid., p. 57.

²⁶Medsker and Tilley, Barriers, p. 59.

²⁷Grace V. Bird, "Preparation for Advanced Study," The Public Junior College, Fifty-fifth Yearbook of the National Society in the Study of Education (Chicago: n.p., 1956), Chapter 5.

of junior college transfers, arrived at less favorable results.²⁸

Medsker reports on a series of studies involving several states on the record made by transfer students entering four-year schools. These studies were reported by individual institutions in the participating states. In California, studies were completed for two state colleges, two major campuses of the state university, and a large private university.²⁹ At Fresno State College, the junior college transfers performed academically only slightly less well than the native students, generally by 0.2 percent of a grade point until the last half of the senior year when the margin was reduced to only 0.1 percent.³⁰ At San Jose State College, the transfers to San Jose State College compared favorably with native students. The difference was only 0.13 of a cumulative grade point in the first quarter after junior classification and less than 0.05 in each subsequent term until the last when the grade point averages were essentially the same.³¹ The University of

²⁸ Alfred H. Wall, The Academic Success of Junior College Transfers to the Junior Level at the University of Colorado (Boulder: University of Colorado Press, 1958), p. 37.

²⁹ Leland L. Medsker, The Junior College: Progress and Prospect (New York: McGraw-Hill, 1960), pp. 121-126. (Hereinafter cited as Medsker, The Junior College.)

³⁰ Medsker, The Junior College, p. 121.

³¹ Ibid., p. 122.

California reported that the differences on the Berkeley campus between the records of the native students and the junior college transfers were very slight--in academic load, academic performance, degree earned, and even in persistence, the two groups were about the same.³² The difference on the Los Angeles campus between the records of the native students and transfers favored the native student.³³ In all of the schools involved in the study in California, the attrition rate was higher among transfer students.³⁴

A study was made of nearly 1,700 transfers from different types of institutions, including junior colleges, to the three public institutions of higher education in Iowa.³⁵ No comparisons between the records of transfer and native students were made in this case.³⁶ There was generally a slight differential between the grades earned before transfer and those earned after transfer.³⁷ The attrition rate was similar to that of junior college transfers and for those who transferred from other colleges.³⁸

³²Ibid.

³³Ibid.

³⁴Ibid., p. 123.

³⁵Ibid.

³⁶Medsker, The Junior College, p. 124.

³⁷Ibid.

³⁸Ibid.

There were only slight differences among the transfer group in all three institutions in terms of the percentage of the transfers who earned baccalaureate degrees.³⁹

The five public institutions of higher learning in Kansas participating in the study included the University of Kansas, Kansas State College, Fort Hayes Kansas State College, and the teachers' colleges located at Pittsburgh and Emporia. At Fort Hayes the transfers were superior to the native students on every count except in the percentages receiving degrees.⁴⁰ At the teacher's college in Pittsburgh both groups earned similar median grade-point averages for the first semester of the junior year; the natives were slightly ahead of the transfers in the next two semesters; and in the last semester, the transfers surpassed the natives by 0.11 grade points.⁴¹ A slightly higher proportion of transfers than natives received degrees in the normal period. The study at Emporia also revealed only slight variations between the two groups, with almost the same retention rate and with the transfer students academically outperforming the natives for two semesters.⁴² A slightly higher proportion of the native group received degrees at the end of the fourth semester. At the University of

³⁹Ibid., p. 125.

⁴⁰Ibid.

⁴¹Medsker, The Junior College, p. 126.

⁴²Ibid.

Kansas, the transfers did less well than the natives in academic achievement although both groups showed consistent improvement through each of the four semesters. The native students were also more persistent--a much higher percentage of them received degrees at the end of the two-year period.⁴³ The study at Kansas State College revealed that the transfer students from four colleges surpassed the native students in grades earned, retention, and the percentage receiving degrees at the end of the senior year.⁴⁴

At the University of Michigan the study revealed that the junior college transfer group attained a grade-point average of 2.4 for the first semester and 2.6 for the second, which compares favorably with that for all juniors.⁴⁵ The study at Michigan State University showed that at the end of a two-year period after transfer, 68 percent of the natives and 53 percent of the transfers received degrees.⁴⁶ The natives surpassed the transfers in academic performance by 0.3 grade points in the first term after transfer, but by the end of the senior year the transfer group was doing better by a small margin than the natives.⁴⁷

⁴³ Ibid.

⁴⁴ Ibid., p. 127.

⁴⁵ Medsker, The Junior College, p. 127.

⁴⁶ Ibid.

⁴⁷ Ibid.

From the University of Mississippi it was possible to obtain information on the records made by transfers from the four-year institutions as well as on those made by junior college transfers and native students.⁴⁸ All three performed equally well academically in the first semester of junior classification although the junior college transfers did somewhat less well than in junior college. In the second semester the native students and the junior college transfers performed alike, and their median grade-point average was somewhat higher than the transfers from four-year institutions.⁴⁹ The persistence rate for all groups was comparatively high. The junior college transfers had a much heavier attrition rate in the second year.⁵⁰ The junior college transfers did not receive nearly as many degrees as the other groups by the end of the second year: 60 percent received degrees, as compared with 75 percent for the native students and 71 percent for the transfers from four-year colleges.⁵¹

At the University of Texas junior college transfers did not perform quite as well as native students.⁵² There was a difference of 0.3 in the first semester, which was

⁴⁸Ibid., p. 128.

⁴⁹Ibid.

⁵⁰Medsker, The Junior College, p. 129.

⁵¹Ibid.

⁵²Ibid.

reduced to approximately 0.2 for the remaining three semesters. However, in the rate of persistence, particularly in the senior group, differences in the two groups were considerable: 95 percent of the native students remained through the senior year as compared with only 72 percent of the transfers.⁵³ Furthermore, 86 percent of the native students obtained degrees compared with only 66 percent of the transfer group. A review of the related research revealed a number of institutions similar in purpose to Surry County College which have conducted institutional research studies.⁵⁴

In order to evaluate long-term benefits to students, William Rainey Harper College conducted five-year and three-year follow-up studies of all 1970 and 1972 alumni.⁵⁵ The population was defined as students who had accumulated forty-eight or more credit hours or had received a degree. In all, 385 of the 1970 alumni, and 1,154 of the 1972 alumni were surveyed by mail or by telephone and 237 responses (61.6 percent) were received from the 1970 alumni. About 70 percent of this population had received a degree or certificate before leaving Harper. Career

⁵³Ibid., p. 130.

⁵⁴Ibid., p. 131.

⁵⁵John A. Lucas, "Follow-up Study of 1970 and 1972 Alumni," Educational Research Information Clearinghouse for Junior Colleges (Berkeley: University of California Press, 1975), p. 3. (Hereinafter Educational Research Information Clearinghouse will be cited as ERIC.)

program alumni tended to remain in their fields, but transfer program alumni drifted away from the fields they had chosen at Harper.⁵⁶ In general, the longer the alumni had been away from Harper, the more likely they were to be working at a higher skill and salary level, and to be working further away from Harper. Of the 1972 transfer alumni, 62 percent, and 37 percent of the 1970 transfer alumni, had earned the bachelor's degree by 1975. Overall, about 80 percent of the transfer alumni had taken at least some other courses at another college since leaving Harper.⁵⁷

In order to evaluate the college parallel program at Southern West Virginia Community College (SWVCC), a follow-up study was conducted of all students who had attended SWVCC between 1967 and 1972 and who had subsequently transferred to Marshall University.⁵⁸ Each of the 204 students in the sample had earned at least thirty semester credit hours at each institution. Grade-point averages earned at each institution revealed that SWVCC transfers experienced some transfer shock in the initial semester, with an average drop of .26, but went on to perform better than they had at SWVCC.⁵⁹ No significant differences were

⁵⁶Ibid.

⁵⁷Ibid., p. 4.

⁵⁸Edwin J. Noland and Donald L. Hall, "A Follow-up Study of Transfer Students from Southern West Virginia Community College to Marshall University," ERIC, 1974, p. 21.

⁵⁹Ibid.

found between the achievement for the transfer students and lower division native students. A questionnaire survey of 109 current transfer students was conducted to elicit subjective evaluations of their college experiences, with a 43 percent response. Personal interviews were then conducted with thirty-five of the respondents. Students expressed high satisfaction with SWVCC because of small classes and personal attention from the faculty and staff.⁶⁰ Transfer shock was attributed to the more demanding course work or upper division classes; the change from the rural environment of SWVCC to the urban setting of Marshall was not considered to be a significant factor.⁶¹

In a study at the University of Minnesota Technical College (UMTC), it was found that most of the graduates were employed. Of those employed, 82 percent were employed in fields they had prepared for at the college, and 88 percent were employed at the mid-management or semi-professional level.⁶² Most of the graduates had remained in rural areas, 66 percent in communities of less than 10,000 and 30 percent in communities of less than 2,000 persons. The report concludes that UMTC can be considered accountable in that its main mission is to prepare

⁶⁰Ibid.

⁶¹Ibid., p. 23.

⁶²Anthony Kuznik, "Follow-up and Evaluation of Graduates from Minnesota Collegiate-Technical Education," ERIC, 1974, pp. 5-6.

individuals for future employment at the mid-management or semi-professional levels in agricultural and related fields and to prepare them for service in rural communities.⁶³

In order to fulfill the requirements of the Ohio State Department of Vocational Education, Lakeland Community College (LCC) conducted a telephone follow-up survey to determine the employment activities of students who graduated from selected technology programs in 1974.⁶⁴ Information regarding the type of employment, job titles, and salaries was sought. The programs selected for follow-up were: (1) data processing, (2) dental hygiene, (3) electronics engineering technology, (4) mechanical engineering technology, (5) medical laboratory technology, and (6) nursing. Of the 116 graduates of these six programs, 103 (89 percent) were contacted. Overall, almost 90 percent of those contacted held jobs which were directly related to their LCC preparation.⁶⁵

A random sample of 14 percent of the 14,725 students enrolled for credit courses at the Center and South Campuses of Macomb County Community College (MCCC) in the spring of 1971 completed a follow-up questionnaire in the fall of

⁶³Ibid., p. 7.

⁶⁴Mary Alice Valvoda, "Follow-up Study of 1974 Graduates in Selected Technology Programs, Lakeland Community College," ERIC, 1975, p. 9. (Hereinafter cited as Mary Alice Valvoda, "Lakeland Community College.")

⁶⁵Mary Alice Valvoda, "Lakeland Community College," p. 9.

1974. The usable response rate was 53 percent.⁶⁶ Students' backgrounds at the time of enrollment were given in terms of age, marital status, residency, and program enrollment. Macomb County Community College's impact on these students was discussed with respect to percentage receiving degrees and continuing their education. Nearly one-half of the students were either presently enrolled in higher education or had graduated from a four-year institution. Transfer students' success at other two-year and four-year schools showed that Macomb County Community College's students were well prepared; grade-point averages revealed remarkable consistency between performance at Macomb and at the four-year transfer institutions.⁶⁷ On the other side, 22 percent of working students felt there was no relationship between course work and their present occupation. Recommendations drawn from the study called for improved job placement services, as well as the need for further studies of this type.⁶⁸

A number of states is beginning follow-up studies of their graduates. The Virginia Department of Community Colleges, for example, surveyed all of the students enrolled in occupational programs from 1966 through 1969

⁶⁶ Alan Gross, "Where Do Students Go?" ERIC, 1975, p. 6.

⁶⁷ Ibid., p. 7.

⁶⁸ Ibid.

and found that 72 percent of these were working full-time.⁶⁹ Maryland has completed its follow-up of students who were enrolled for the first time in the fall of 1971. They also reported that 73 percent of these students were employed at the time the survey was taken.⁷⁰

All of the related research revealed varied attempts to measure and to evaluate activities of graduates of post-high school technical-vocational programs and college parallel programs. The objective of this research is to supplement the available knowledge regarding graduates of technical-vocational and college parallel programs with emphasis on post-community college education, geographic mobility, and economic status of vocational students and post-community college educational activities of college parallel graduates.

The objective will be attained by studying in detail the activities of the graduates of college parallel and technical-vocational programs at Surry Community College over a ten-year period of time.

⁶⁹A Profile of Former Occupational-Technical Students (Richmond: Virginia Department of Community Colleges, 1975), p. 12.

⁷⁰Maryland Community Colleges: Student Follow-up Study of First Time Students, Fall 1971 (Annapolis: Maryland State Board for Community Colleges, 1975), p. 22.

PROCEDURE

The procedure followed was to obtain the names of 10,000 persons who have attended Surry Community College from 1966 through 1975. These were located in a file in the office of Student Personnel Services. This file was used to locate the permanent records of the graduates to be studied.

The names of all graduates from 1968 through 1975 were obtained from official commencement announcements kept on file in the office of Student Personnel Services.

The final questionnaires were the result of contributions by many individuals who were qualified in this field. A great deal of collective experience went into the creation of the forms and their refinement to the final form. All of these persons were involved in technical-vocational education and college parallel programs at Surry Community College. Included were the Director of technical-vocational education, the Director of the Evening College, the Dean of Instruction, and a number of faculty members with experience in this area (see Appendix B).

A rough draft of the final questionnaires to be used was submitted to a group of faculty and staff members at Surry Community College. Their comments and criticisms were incorporated into the final instruments (see Appendix C).

Questionnaires were sent to 347 college parallel graduates and 497 technical-vocational graduates. A review of related literature revealed that the rate of return for this type of study ranged from 30 to 60 percent. Follow-up letters were sent until a rate of 53 percent of the technical graduates and 77 percent of the college parallel graduates had been attained (see Appendix D).

Nine different programs were studied. These included college parallel (347 graduates), auto mechanics (52 graduates), business technologies (202 graduates), carpentry (45 graduates), drafting and design (30 graduates), electronics (58 graduates), machinist technology (24 graduates), nursing (56 graduates), and welding (30 graduates).

Also, as a preliminary step to this study, the Board of Trustees of Surry Community College was informed of this research project. They unanimously endorsed this study as a valuable and accurate measure of the performance of Surry Community College graduates (see Appendix E). The Department of Community Colleges in Raleigh, North Carolina, was also informed of this study. A letter was received from Dr. Ben E. Fountain, Jr., State President of the organization, endorsing the study as a significant study which could be used as a model for other institutions for follow-up studies (see Appendix F).

Chapter II

POST-COMMUNITY COLLEGE EDUCATIONAL ACTIVITIES OF TECHNICAL-VOCATIONAL GRADUATES

The type and scope of junior and community college occupational programs evolved from a variety of forces in our culture. The growing complexity of work in many industries and professions made it necessary to break tasks into graduated skill levels. In engineering, for example, a skill gap occurred between the high school level draftsman and the professional engineer. Two-year programs to train "Engineer Aides" were created to fill this skill gap. Similar examples could be cited from sub-fields of medicine, such as associate degree nursing and dental hygiene.

Breaking jobs down into a hierarchy of skills resulted in a strong emphasis on an optimum time period of two years for a student to complete occupational programs. An analysis was made in Chapter Two of the formal educational activities that have taken place after completion of the technical-vocational program at Surry Community College. This was done to test the validity of the concept which assumes that two years is optimum for technical-vocational programs. This was accomplished by analyzing the post-community college formal educational activities of

the graduates of the technical-vocational programs at Surry Community College. Interpretation of this data determined the extent that the programs were terminal versus the extent that they were used as a foundation for further education.

FORMAL EDUCATION TAKEN AFTER ASSOCIATE DEGREE

One of the main objectives of this research involved measuring the amount of formal education taken after attaining an associate degree in a technical-vocational program. The population consisted of graduates from 1968 through 1975. The survey part of this research took place early in 1976. Those who graduated in 1975 did not have sufficient time to accumulate additional college credits after graduation from Surry Community College. Therefore, the analysis of the data on the amount of post-community college education was performed after eliminating the data from the 1975 graduates.

Table 1, page 32, contains a summary of the data on the amount of post-community college education by occupational groups. The "N" column refers to the number of persons who responded to this question. The groups are presented from the field with the largest amount of post-community college education, down to the field with the smallest amount.

Note the split between the bottom two groups, Nursing and Business Technologies. These two groups are

Table 1
Mean Number of Semester Hours of Post-Community
College Education, Technical-
Vocational Graduates

Occupational Area	Number of Students	Mean Number of Semester Hours
Auto Mechanics	26	16.05
Business Technologies	62	5.80
Carpentry	13	10.30
Drafting and Design	26	21.47
Electronics	36	14.92
Machinist Technology	9	27.25
Nursing	31	1.35
Welding	14	9.33
Other	49	0.81

comprised predominantly of female students. The other fields, Auto Mechanics, Carpentry, Drafting and Design, Electronics, Machinist Technology and Welding are comprised predominantly of male students. This could indicate that in our technological culture, males felt more need to attain additional education beyond that accomplished with an associate degree than females.

Another set of circumstances helped to explain these variations. Two of the areas which were below average in the amount of further education, Business Technologies and Nursing, each had similar programs which were college transfer oriented. Specifically, the 1968-1970 catalog for Surry Community College listed Business Administration under the general college transfer programs. Similarly, four-year schools in the area have specifically requested that students desiring to pursue a Bachelor of Science in Nursing enter Surry Community College's two-year liberal arts program. Thus, persons desiring a four-year degree or persons who know they will eventually desire to transfer to a four-year institution could have been counseled into these transfer programs.¹

From an analysis of Table 1, it also appears that the overwhelming majority of Surry Community College graduates in the technical-vocational programs entered full-time

¹Surry Community College Handbook, Vol. II, 1968-1969, p. 24.

employment rather than a full-time educational program. To further analyze the amount of part-time college education, a study was made of the distribution of the credits earned within each curriculum and for the total group.

Table 2, pp. 35-36, reinforces the data in Table 1. This table shows that eight students, 47 percent in Auto Mechanics, had taken courses beyond the degree requirements at Surry Community College. The other programs showing students having taken courses beyond the degree requirements at Surry Community College were the following: Carpentry, three students (13 percent); Drafting and Design, nine graduates (34 percent); Electronics, thirteen graduates (36 percent); Machinist Technology, five students (55 percent); Nursing, one student (.03 percent); Welding, four students (28 percent); and Business Technology, ten students (18 percent). These figures and percentages are based on students who took more than 9.5 semester hours at the college.

The predominant male areas of Auto Mechanics, Carpentry, Drafting and Design, Electronics, Machinist Technology, and Welding show a wide distribution of credits. Electronics, Machinist Technology, and Drafting and Design, the group of Engineering Technologies, had the largest percentage of graduates taking post-community college credits. This could be true because of the early development of Bachelor of Technology Degrees for Engineering students at the University of North Carolina at Charlotte.

Table 2

Distribution of Post-Community College Semester Hours Earned
by Graduates of Technical-Vocational Programs

Curriculum	0- 9.5	9.5- 19.0	19.0- 28.5	28.5- 38.0	38.0- 47.5	47.5- 57.0	57.0- 66.5
Auto Mechanics (N = 26)	17	1	2	3	1	1	0
Business Technologies (N = 62)	55	2	0	1	0	0	2
Carpentry (N = 13)	10	0	0	1	1	0	1
Drafting and Design (N = 26)	17	0	3	1	1	0	1
Electronics	23	0	1	9	0	0	2
Machinist Technology (N = 9)	4	0	1	2	0	0	0
Nursing (N = 31)	30	0	2	1	1	0	0
Welding (N = 14)	10	0	2	1	1	0	0
Other (N = 49)	49	0	0	0	0	0	0

Table 2 (continued)

Curriculum	66.5- 76.0	76.0- 85.5	85.5- 95.0	95.0- 104.5	104.5- 114.0	114.0- 123.5	123.5- 133.0	142.5- 152.0	152.0- 161.5	Over 161.5
Auto Mechanics	0	0	0	0	0	0	0	0	1	0
Business Technologies	1	0	0	1	0	0	0	0	0	0
Carpentry	0	0	0	0	0	0	0	0	0	0
Drafting and Design	2	0	0	0	0	0	0	0	0	1
Electronics	0	0	1	0	0	0	0	0	0	0
Machinist Technology	1	1	0	0	0	0	0	0	0	0
Nursing	0	0	0	0	0	0	0	0	0	0
Welding	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0

Again the smallest number of credits received seemed to be in the predominantly female occupations of Business Technologies and Nursing.

The group listed as "other" included students who returned surveys with the program space left blank or who listed a program not offered at Surry Community College. These included Industrial Technology (eleven students), Agricultural Technology (thirteen students), and Graphic Arts (fourteen students). A total of 266 graduates (53 percent) answered this question.

Tables 3 and 4 (pp. 38 and 39) show where the graduates under study took their college work after attaining an associate degree. According to the results of this survey, only six students took courses beyond the associate degree requirements in another state. One graduate took some correspondence type courses while serving in the armed forces in Vietnam.

As indicated earlier in this chapter, the University of North Carolina at Charlotte and Appalachian State University in Boone, North Carolina have developed Bachelor of Technology degrees for graduates of technical-vocational programs from community colleges and technical institutes. This probably accounts for the fact that the largest number of graduates transferred to one of those institutions: fifteen to the University of North Carolina at Charlotte and sixteen to Appalachian State University at Boone, North Carolina.

Table 3

States to Which Students Moved and Took Additional
Formal Education, Technical-Vocational Graduates

State or Countries	Number of Students
Texas	1
Virginia	2
Vietnam	1
South Carolina	1
Florida	1

Table 4

Number of Students Who Did Post-Community College Work
at North Carolina Universities, Technical-
Vocational Graduates

Curriculum	UNC-Greensboro	UNC-Charlotte	UNC-Chapel Hill	North Carolina State University	Appalachian State University	Western Carolina University	Other In-state	Other Out-of-state	TOTALS
Auto Mechanics	0	0	0	0	1	0	10	1	12
Business Technologies	0	0	0	0	4	1	1	1	7
Carpentry	0	0	0	0	2	0	1	1	4
Drafting and Design	0	4	1	0	5	1	2	1	14
Electronics	0	11	0	0	1	0	2	2	16
Machinist Technology	0	0	0	0	2	0	4	0	6
Nursing	0	0	0	0	0	0	2	0	2
Welding	0	0	0	0	1	0	6	0	7
Other	0	0	0	0	0	0	1	0	1
TOTALS	0	15	1	0	16	2	29	6	69

Another comment on the distribution shown in Table 4 concerns the large number of graduates (twenty-nine) who indicated they had taken courses beyond the requirements for a degree at Surry Community College at an institution other than the ones listed. From the analysis of the data, it appeared that most of these students entered Surry Community College in another technical-vocational program or entered another community college or technical institute in another technical or vocational program.

NUMBER AND PROPORTION OF GRADUATES WORKING TOWARD OR ATTAINING HIGHER DEGREES

Participants were asked on the questionnaire (Appendix C) to indicate if they were working on or had received a bachelor's or a master's degree. Only twenty-seven (10 percent) of the 266 graduates who responded to this question indicated they were working toward a bachelor's degree.

Analysis of the data revealed that thirteen of the graduates (4.8 percent) had received a bachelor's degree. Drafting and Design Technology and Electronics had the highest percentage of graduates working toward a degree with 3.8 percent and 27.8 percent, respectively. Again, this is significant because of the early development of the bachelor of technology degree at the University of North Carolina at Charlotte. The largest number of graduates who had attained a bachelor's degree were graduates of the

drafting and design technology program at Surry Community College. Table 5 (p. 42) contains a summary of the distribution of the data for graduates who were working on or who had attained a bachelor's degree.

It is significant to note that the number who received a degree or who were working toward a degree are concentrated in the years 1972-1974 (see Table 6, pp. 43-45). Until recently, technical-vocational programs have been developed as terminal programs. C. C. Colvent, an American Association of Junior Colleges President in the early 1940s, chastised the membership in his presidential address in 1941:

Had not we of the Junior Colleges been so busy trying to offer courses which would get our graduates into the senior colleges instead of . . . offering appropriate and practical courses--terminal courses--for the vast majority of the Junior College students, we might have thought to ask for, and as a result of having asked, received the privilege of training these young people.²

This philosophy prevailed and influenced the philosophy and development of junior and community colleges in the United States.

Policies pertaining to acceptability of vocational-technical course credits are conspicuously absent in state-wide pacts.³ Acceptance is gradually spreading, but

²C. C. Colvent, "Terminal Education and the National Defense," Junior College Journal, May 1941, p. 496.

³Frederick C. Kintzer, "Articulation/Transfer: Statewide Policy Documents," Office of Educational Credit Newsletter, No. 46 (Washington, D.C.: American Council on Education, 1976), p. 3. (Hereinafter cited as Kintzer, "Statewide Policy Documents.")

Table 5

Number and Percent of Graduates in Each Program Who Were Working on or Had Attained Bachelor's Degree, Technical-Vocational Graduates

Curriculum	Working Toward Bachelor			Attained Bachelor		
	N	Number	Percent	N	Number	Percent
Auto Mechanics	26	0	0		1	3.8
Business Technologies	62	4	6.5		3	4.8
Carpentry	13	0	0		1	7.7
Drafting and Design	26	8	30.8		4	15.4
Electronics	36	10	37.8		3	8.3
Machinist Technology	9	1	11.1		1	11.1
Nursing	31	1	3.0		0	0
Welding	14	2	14.3		0	0
Other	49	1	2.0		0	0
TOTALS	266	27	10.2		13	4.8

Table 6

Number and Percentage of Graduates in Each Program Working Toward
or Having Received Higher Degrees by Year,
Technical-Vocational Graduates

Curriculum	Total	Year of Graduation						
		1968	1969	1970	1971	1972	1973	1974
AUTO MECHANICS								
Returned Questionnaire	26							
Working on Bachelor Degree		0	0	0	0	0	0	0
Percent of Total		0	0	0	0	0	0	0
Received Bachelor Degree		0	0	1	0	0	0	0
Percent of Total		0	0	3.8	0	0	0	0
BUSINESS TECHNOLOGIES								
Returned Questionnaire	62							
Working on Bachelor Degree		0	0	1	0	1	1	1
Percent of Total		0	0	1.6	0	1.6	1.6	1.6
Received Bachelor Degree		0	0	0	0	1	1	1
Percent of Total		0	0	0	0	1.6	1.6	1.6
CARPENTRY								
Returned Questionnaire	13							
Working on Bachelor Degree		0	0	0	0	0	0	0
Percent of Total		0	0	0	0	0	0	0
Received Bachelor Degree		0	0	1	0	0	0	0
Percent of Total		0	0	7.7	0	0	0	0
DRAFTING AND DESIGN								
Returned Questionnaire	26							
Working on Bachelor Degree		0	0	0	0	3	3	2
Percent of Total		0	0	0	0	11.5	11.5	7.7
Received Bachelor Degree		0	0	0	0	0	2	2
Percent of Total		0	0	0	0	0	7.7	7.7

Table 6 (continued)

Curriculum	Total	Year of Graduation						
		1968	1969	1970	1971	1972	1973	1974
ELECTRONICS								
Returned Questionnaire	36							
Working on Bachelor Degree		0	0	0	1	4	3	2
Percent of Total		0	0	0	2.7	11.1	8.3	5.5
Received Bachelor Degree		0	0	0	0	3	0	0
Percent of Total		0	0	0	0	8.3	0	0
MACHINIST TECHNOLOGY								
Returned Questionnaire	9							
Working on Bachelor Degree		0	0	0	0	0	1	0
Percent of Total		0	0	0	0	0	11.1	0
Received Bachelor Degree		0	0	0	0	0	1	0
Percent of Total		0	0	0	0	0	11.1	0
NURSING								
Returned Questionnaire	31							
Working on Bachelor Degree		0	0	0	0	0	1	0
Percent of Total		0	0	0	0	0	3.2	0
Received Bachelor Degree		0	0	0	0	0	0	0
Percent of Total		0	0	0	0	0	0	0
WELDING								
Returned Questionnaire	14							
Working on Bachelor Degree		0	0	0	0	0	2	0
Percent of Total		0	0	0	0	0	14.2	0
Received Bachelor Degree		0	0	0	0	0	0	0
Percent of Total		0	0	0	0	0	0	0

Table 6 (continued)

Curriculum	Total	Year of Graduation						
		1968	1969	1970	1971	1972	1973	1974
OTHER								
Returned Questionnaire	49							
Working on Bachelor Degree		0	0	1	0	0	0	0
Percent of Total		0	0	2.0	0	0	0	0
Received Bachelor Degree		0	0	0	0	0	0	0
Percent of Total		0	0	0	0	0	0	0
TOTAL								
Returned Questionnaire	266							
Working on Bachelor Degree		0	0	2	1	8	11	5
Percent of Total		0	0	.7	.3	3.0	4.1	1.8
Received Bachelor Degree		0	0	2	0	4	4	3
Percent of Total		0	0	.7	0	1.5	1.5	1.1

primarily on an institutional basis rather than statewide and primarily where baccalaureate degrees have been developed to build on the initial work provided by community colleges and technical institutes.⁴

Examples of cooperative institutional efforts are found in Delaware (Consortium on Occupational Teacher Education), North Carolina (where many senior institutions including the major universities accept Associate of Applied Science degrees), Ohio (where an Associate of Individualized Study degree is available on the campuses of the public higher education system), Oregon (where there is considerable feeling that some vocational-technical credits should be acceptable as general elective units), Texas (most recently in Law Enforcement programs), and Washington (where many senior institutions are accepting up to twenty-five credits of vocationally oriented courses as electives).⁵

These data were studied in regard to the time span between receiving the associate degree and the bachelor's degree. Table 7 (p. 47) contains a summary of the findings. Those who finished the bachelor's degree in less than two years after attaining the associate degree took advantage of the year-around operation of North Carolina's universities. A variety of factors influenced those who took a

⁴Ibid.

⁵Kintzer, "Statewide Policy Documents," p. 3.

Table 7

Mean Number of Years between Receiving Associate
in Applied Science or Diploma and
Bachelor's Degree

Curriculum	Mean Number of Years between Associate and Bachelor's Degree
Auto Mechanics	4.000
Business Technologies	2.000
Carpentry	-----
College Parallel	3.333
Drafting and Design	2.000
Electronics	1.667
Machinist Technology	2.000
Nursing	-----
Welding	-----
Other	-----
TOTAL	2.3571

longer time to complete the bachelor's degree. Lack of transferability of technical-vocational courses made it necessary for persons to repeat courses offered in the first two years of a four-year program. Financial considerations sometimes made it necessary for a student to find employment after taking the associate degree.⁶

No clear pattern seems to exist relative to the number of years between receiving the associate degree and the bachelor's degree. However, the technical-vocational graduates who did attain the bachelor's degree required an average amount of time slightly longer than two years. The group averaged 2.35 years.

⁶Ibid., p. 8.

Chapter III

ECONOMIC STATUS

This chapter will describe the economic status of graduates of Surry Community College in the technical-vocational programs. An analysis of beginning and present salaries, types of salary structures, and advancement on the job will be presented. For comparison purposes, all salaries were converted to a yearly basis. Average yearly salaries, beginning and present, were then computed by program.

In Table 8 (p. 50) the salaries are presented from highest to lowest level by program. The wages for the nursing graduates ranked number one in beginning salaries, but dropped to number four in present salaries. The engineering technology graduates, drafting and design, electronics and machinists ranked second, third, and fourth, respectively, in beginning salaries. The machinist technology graduates dropped to number five in present salaries. The business technology graduates ranked number eight both in beginning and in present salaries. Auto mechanic graduates ranked ninth both in beginning and in present salaries.

The nursing graduates had the lowest percentage of graduates transferring to a four-year institution. Since

Table 8

Mean Beginning and Present Annual Salaries
 Ranked High to Low by Program, Technical-
 Vocational Graduates

Mean Beginning Salary	Mean Present Salary
Nursing	Electronics
Drafting and Design	Drafting and Design
Electronics Technology	Carpentry
Machinist	Nursing
Carpentry	Machinist Technology
Welding	Welding
Business Technologies	Business Technologies
Auto Mechanics	Auto Mechanics

these graduates ranked first in beginning salaries, it is possible that the nursing graduates did not feel the need for further training due to the adequacy of their beginning salaries. The drafting and design graduates and the electronics graduates, however, had one of the highest percentages of graduates transferring to a four-year institution. It is possible that the high number receiving a bachelor's degree affected the salaries of the drafting and design and electronics graduates.

The data in Table 9 (pp. 52-56) show that all the technical-vocational areas experienced yearly increases in salaries. Not only did Electronics Technology, Drafting and Design Technology, and Carpentry rank one, two and three in mean present salary, as was indicated in Table 1, but these three programs also ranked one, two, and three in average yearly percent increase in salaries.

For a further analysis of these data, a comparison was made of Surry Community College graduates' average present salary as compared to six selected cities in the United States. These salaries were given in The World Almanac.¹

As the data indicate, Surry Community College graduates in five selected programs ranked below the average of the salaries in the six selected cities of Birmingham,

¹The World Almanac (New York: Newspaper Enterprise Association, Inc., 1976), p. 104.

Table 9
 Mean Beginning and Present Annual
 Salaries by Year Graduated

Year Graduated	N	Beginning Salary	Present Salary	Average Yearly Percent Change
AUTO MECHANICS				
1968	0	0	0	0
1969	1	2476.00	6760.00	24.72
1970	3	4614.66	7490.66	26.84
1971	2	0	0	0
1972	7	6617.14	7365.71	3.00
1973	4	2080.00	3670.00	75.67
1974	4	2202.00	3138.00	21.50
1975	5	5952.79	6202.39	5.00
BUSINESS TECHNOLOGIES				
1968	4	3495.00	3945.00	2
1969	3	5346.66	10821.33	15
1970	4	4365.00	8055.00	14
1971	6	3150.00	4219.00	7
1972	7	5326.85	6531.28	6
1973	12	4267.83	5879.16	13
1974	16	4841.25	5880.75	11
1975	10	5739.00	6469.00	13

Table 9 (continued)

Year Graduated	N	Beginning Salary	Present Salary	Average Yearly Percent Change
CARPENTRY				
1968	0	0	0	0
1969	0	0	0	0
1970	3	5200.00	12133.33	22
1971	1	6720.00	10032.00	10
1972	2	7282.00	9102.00	6
1973	0	0	0	0
1974	2	0	0	0
1975	5	5470.00	6583.19	21
DRAFTING AND DESIGN				
1968	2	9550.00	15690.00	8
1969	3	3206.66	7506.66	19
1970	1	0	0	0
1971	1	9960.00	11952.00	4
1972	2	6162.00	11550.00	22
1973	5	6860.79	10406.19	13
1974	3	6866.66	7553.33	5
1975	9	7346.66	7633.77	4

Table 9 (continued)

Year Graduated	N	Beginning Salary	Present Salary	Average Yearly Percent Change
ELECTRONICS				
1968	2	7458.00	12768.00	9
1969	3	8126.66	12552.00	8
1970	2	6760.00	11726.00	12
1971	3	6777.33	12476.00	17
1972	4	6128.00	9292.50	13
1973	5	5144.19	7679.79	17
1974	7	6848.57	7917.00	14
1975	10	2782.00	3866.00	39
MACHINIST TECHNOLOGY				
1968	0	0	0	0
1969	0	0	0	0
1970	0	0	0	0
1971	0	0	0	0
1972	1	7800.00	7800.00	0
1973	1	6240.00	6240.00	0
1974	4	6675.00	7729.00	8
1975	3	6073.33	6973.33	2

Table 9 (continued)

Year Graduated	N	Beginning Salary	Present Salary	Average Yearly Percent Change
NURSING				
1968	0	0	0	0
1969	0	0	0	0
1970	0	0	0	0
1971	0	0	0	0
1972	0	0	0	0
1973	10	8581.79	11036.89	10
1974	12	7301.91	8294.83	7
1975	9	7257.77	7830.21	8
WELDING				
1968	0	0	0	0
1969	0	0	0	0
1970	0	0	0	0
1971	3	6366.66	8200.00	6
1972	4	3300.00	3500.00	3
1973	1	6200.00	7280.00	6
1974	3	6465.33	7505.33	8
1975	3	6146.66	6189.33	1

Table 9 (continued)

Year Graduated	N	Beginning Salary	Present Salary	Average Yearly Percent Change
OTHER				
1968	0	0	0	0
1969	1	12500.00	15500.00	3
1970	0	0	0	0
1971	0	0	0	0
1972	0	0	0	0
1973	1	8320.00	8320.00	0
1974	1	7200.00	8000.00	6
1975	8	6813.00	7889.00	16

Alabama, Houston, Texas, Oakland, California, Toledo, Ohio, St. Louis, Missouri, and Worcester, Massachusetts.

The data given in Table 10 (p. 58) should not, however, be interpreted as an indictment of the salaries of Surry Community College graduates. The Southeastern region of the United States ranks fifth out of eight geographic regions in per capita income. The per capita income in North Carolina in 1974 was only \$4,668.00. Also, the six cities are highly urbanized and unionized as compared with Surry County, which is rural and non-union.²

In his book, Second Best: The Crisis of the Community College, L. Steven Zwerling stated that fewer than 25 percent of students in community colleges or two-year colleges ever graduate. The average annual income of these graduates is about \$9,500.00.³

Lexie Daniel Walters in his dissertation, "An Analysis of the Return from Investments in Technical Education in South Carolina," concluded that a private investment in technical education on the average is an excellent investment. He found that the average salary of technical education graduates in South Carolina was \$8,810.00 in 1974.⁴

²Ibid., p. 88.

³L. Steven Zwerling, Second Best: The Crisis of the Community College (New York: McGraw-Hill, 1976), p. 14. (Hereinafter cited as Zwerling, Second Best.)

⁴Lexie Daniel Walters, "An Analysis of the Returns from Investments in Technical Education in South Carolina" (Dissertation Abstracts) Clemson University, 1975, p. iii.

Table 10

A Comparison of Surry Community College Salaries with
Occupational Earnings in Six Selected Cities

Occupation	Birmingham, Alabama	Houston, Texas	Oakland, California	Toledo, Ohio	St. Louis, Missouri	Worcester, Massachusetts	City Aver.	SCC Aver.
Draftsmen	12,376	14,222	13,650	14,508	14,014	14,508	13,524	10,327
Nurses	10,166	10,842	12,116	11,648	11,596	10,244	11,110	9,053
Secretaries	8,268	8,190	8,840	9,802	9,256	9,940	8,974	6,462
Carpenters	12,376	11,689	12,542	14,768	12,875	12,584	12,805	9,462
Machinists	12,937	13,395	14,872	13,083	13,603	11,980	13,311	7,185

The average salary of Surry Community College graduates was found to be \$8,148.00. Although the salaries were slightly lower than the averages found in six selective cities, Surry Community College graduates of technical-vocational programs indicated they were pleased with their program at Surry Community College. A total of 268 graduates responded to a question concerning their preparation at Surry Community College. Of the 268, a total of sixty-four, 23.8 percent, indicated their preparation was excellent. This group was followed by 131, 48.8 percent, who indicated fair preparation, and by five graduates, 1.8 percent, who indicated poor preparation. These data are summarized in Table 11, page 60. For a further interpretation of the data presented thus far, it should be pointed out that 148 graduates, 61 percent, from a total of 241 responding, indicated they were working in the field related to their training.

TYPES OF SALARY STRUCTURES

The respondents were asked to describe the type of salary structure under which they were employed. Table 12 (p. 61) contains a summary of these data.

An attempt was made to determine the impact of promotion and increased responsibility on salaries. It would seem that a high percentage in the early years would indicate promotion came with years of experience.

Table 11
Preparation in Technical-Vocational Programs

Value	Number	Percent
Excellent	64	23.8
Good	131	48.8
Adequate	45	16.8
Fair	23	8.5
Poor	5	1.8

Table 12
Types of Salary Structure, Technical-
Vocational Graduates

Curriculum	Salary, Tied to Cost of Living	Salary Schedule	Other	Total
Auto Mechanics	8	7	4	19
Business Technologies	23	24	31	78
Carpentry	3	4	4	11
Drafting and Design	4	12	14	30
Electronics	6	15	17	38
Machinist Technology	1	4	2	7
Nursing	15	18	15	48
Welding	3	2	4	9
Other	1	2	3	6
TOTAL	64	88	94	246

No pattern seems to exist. Therefore, no conclusions can be drawn from these data.

Table 13 (p. 63) contains a summary of these data relative to promotion and increased responsibility.

SALARY LIMITS BASED ON TYPE OF DEGREE

The participants were asked whether their salaries were controlled or limited by the type of degree attained. Table 14 (p. 64) summarizes the number and percent of each group which answered "yes" to this question.

The graduates from Drafting and Design programs had the highest number who answered "yes" to this question. Another engineering type program, Electronics Technology, was second to the Drafting and Design program.

From the 238 respondents to this question, sixty-two graduates, or 26 percent, answered "yes." It appears from these data that Surry Community College graduates felt that their salary was affected by a cost of living index, a salary schedule, or some other variable. It is possible, however, that the degree was the most important variable in obtaining employment, as pointed out by L. Steven Zwerling. Zwerling confirms that ten years ago it was generally agreed that a person needed a high school diploma to get a good job; now it is becoming widely accepted that a person needs at least a degree from a two-year college or even

Table 13

Percent of Graduates in Each Program Who Indicated
Salary Increases Based on Promotion and
Increased Responsibility, Technical-
Vocational Graduates

Curriculum	1968	1969	1970	1971	1972	1973	1974	1975
Auto Mechanics	0	0	0	0	0	0	0	20.0
Business Technologies	0	33.3	0	0	14.3	8.3	6.3	0
Carpentry	0	0	0	0	50.0	0	0	0
Drafting and Design	50.0	0	0	0	50.0	0	0	0
Electronics	0	0	0	0	0	0	0	0
Machinist Technology	0	0	0	0	0	0	0	0
Nursing	0	0	0	0	0	30.0	0	11.1
Welding	0	0	0	0	0	0	0	0
TOTAL	7.7	7.1	6.7	10.7	10.8	8.9	3.6	2.9

Table 14

Number and Percent of Graduates in Each Program Who
Indicated Salaries Were Limited to Type of
Degree Attained, Technical-
Vocational Graduates

Curriculum	N	Number Answering "Yes"	Percent
Auto Mechanics	26	4	15.4
Business Technologies	62	12	19.4
Carpentry	13	4	30.8
Drafting and Design	26	15	57.7
Electronics	36	9	25.0
Machinist Technology	9	3	33.3
Nursing	31	9	29.0
Welding	14	4	28.6
Other	11	2	18.2
TOTAL	238	62	26.0

one from a four-year school in order to avoid getting a bad job.⁵

Table 15 (p. 66) shows the relative ranking (high or low) of the amount of post-community college education, as found in Table 1, Chapter 2, and the ranking of the responses regarding salaries being limited by the type of degree from Table 14.

The data in Table 15 indicate that, in some areas, there seems to be a close relationship between the amount of post-community college education and salary limitations based on the degree attained. An analysis of the data in Table 12 indicated that it did not appear that Surry Community College graduates perceived of the degree as one of the more important variables affecting salaries. The positive relationship between the amount of post-community college education and salary limitations based on the degree attained in Drafting and Design Technology would indicate that some graduates saw the advantages and possibilities for upward advancement. This positive relationship also exists in another engineering curriculum, Electronics. These were two of the highest salaried types of graduates, as indicated in Table 8. It appears that the Engineer graduates did feel that post-community college education affected the salary and that salaries were limited by the type of degree.

⁵Zwerling, Second Best, p. 17.

Table 15
 Ranking of Post-Community College Education
 Compared with Ranking Regarding Salaries
 Limited by Type of Degrees

Ranking of Amount of Post-Community College Education (High to Low)	N	Ranking of Percent Indicating Salary Limited by Type of Degree (High to Low)	N
Machinist Technology	9	Drafting and Design	15
Drafting and Design	26	Business Technologies	12
Auto Mechanics	26	Electronics	9
Electronics	36	Nursing	9
Carpentry	13	Auto Mechanics	4
Welding	14	Carpentry	4
Business Technologies	62	Welding	4
Nursing	31	Machinist Technology	3
Other	11	Other	2

The law of supply and demand is an important variable in any employment analysis. Employment projections for the period from 1974 through 1985 indicate that North Carolina will experience an industrial employment growth of over 544,000 workers and experience an industrial employment growth rate of 2.2 percent annually.⁶ During the period, national expansion is estimated at 17.4 million and the national annual average industrial growth rate is estimated at 1.8 percent.⁷ Employment in the professional, technical, and kindred occupations is projected to increase 33 percent over the period 1974-1985. This is an average annual percentage increase of 3.0 percent. The employment of registered nurses is projected to increase by 6,290; this is the largest increase for a single occupation in the professional and the technical occupational grouping.⁸ Drafting and Design is one of eight occupations with at least 2,000 employment in 1974 estimated to increase by more than 50 percent by 1985.⁹ During the period 1974 through 1985, the 40 percent employment increase of clerical workers will be the largest gain of the major occupational groupings. Within the clerical group, the

⁶"North Carolina Employment Projections to 1985," Industry Trends Employment Projections (Raleigh: Employment Security Commission, 1976), p. 2.

⁷Ibid., p. 6.

⁸Ibid.

⁹Ibid., p. 27.

largest numerical employment increase over the eleven-year period will be in the occupation of secretaries.¹⁰ Trailing far behind the secretarial increases, but estimated to have large expansion needs are typists, bank tellers, bookkeepers, cashiers, counter clerks, receptionists, shipping and receiving clerks, store clerks, and store keepers.¹¹ Three of the clerical workers occupations with at least 2,000 employment in 1974 are estimated to increase by at least 50 percent by 1985. These are secretaries, billing clerks, and teacher aides.¹²

Therefore, the high salary ranking of Drafting and Design graduates and Nursing graduates could be the result of the demand for these graduates. Although the salaries for Business Technology graduates ranked low in the past, projections for an expanded demand will probably serve to upgrade the salary of these graduates in the future.

¹⁰ Ibid.

¹¹ Ibid., p. 28.

¹² Ibid., p. 38.

Chapter IV

GEOGRAPHIC MOBILITY

Many two-year technical-vocational programs were predicated on serving a limited geographic area. This implied that the students would be drawn from the local population. Upon graduation, it was assumed the graduates would enter the job market in the same geographic area. Also implied was that adequate employment would be available in the same geographic area.¹

This research described the mobility of persons to the Surry Community College geographic area for the purpose of enrolling in a specific two-year program. Also described was the amount of mobility away from the Surry Community College area after the completion of a two-year program.

There were some possible implications if the mobility both to and from the Surry Community College area was high. This could have been related to regional attempts at preventing expensive duplication. Bethel has pointed out:

Some states and local communities are considering the possibility of regional planning of specialized programs such as are now found in Los Angeles. This would suggest that a highly

¹Ralph R. Fields, The Community College Movement (New York: McGraw-Hill, 1962), p. 83.

specialized program located in one community might also serve the needs of adjoining communities. By appropriate locations of these different programs, each community would be better served by a superior program and at less expense than if each community attempted to offer all programs.²

Respondents were asked if they moved to the Surry Community College area in order to participate in an occupational program. They were also asked if they had moved from the Surry Community College area after the completion of the program at the college.

Analysis of these data indicated that only a small number of students moved to the Surry Community College area in order to participate in a technical-vocational program. In fact, of the 278 respondents to this question, only eleven students, 3.9 percent, moved to the Surry Community College geographical area in order to participate in a program. Table 16 (p. 71) contains the summary of the data relating to the mobility both to and from Surry Community College by the students.

These findings relate positively to information already published concerning this subject. Of the 437 undergraduates who entered Surry College in 1975, 299 students, 68.4 percent, were from Surry County. Ninety-eight students, or 22.4 percent, were from the adjacent counties. Only forty students were from other counties

²Lawrence D. Bethel, "Vocational Education," National Society for the Study of Education, 55th Yearbook (1956), p. 115.

Table 16

Mobility to and from the Surry Community College Geographic Area,
 Technical-Vocational Graduates

Curriculum	N	Number Moved to Area	Percent	Number Moved from Area	Percent
Auto Mechanics	26	0	0	4 (3)	15.4
Business Technologies	87	4	4.5	24 (5)	27.5
Carpentry	13	2	15.4	4 (1)	30.8
Drafting and Design	26	0	0	10 (3)	38.5
Electronics	36	1	2.8	17 (4)	47.2
Machinist Technology	9	0	0	3 (2)	33.3
Nursing	31	3	9.7	12	38.7
Welding	14	0	0	4	28.6
Other	36	0	0	12	33.3
TOTAL	278	11	4.0	90	32.4

*Number in parentheses indicates number pursuing further education.

or from out-of-state.³ It appears, therefore, that Surry Community College attracts students predominantly from within its geographic region.

The data presented in Table 16 show that ninety graduates, 32.3 percent, moved from the Surry Community College geographic area after completing a program. Some of the mobility was due to persons leaving in order to obtain more formal education. These figures are noted in parentheses in Table 16. A follow-up study conducted by the Virginia Department of Community Colleges revealed that approximately 98 percent of the respondents were Virginia residents at the time of their enrollment at the community colleges. This distribution was true for all sex and racial groups and for graduates and non-graduates. It is of interest that a majority of these former students (86 percent of the graduates and 90 percent of the non-graduates) remained and found employment in Virginia.⁴

Since only 9.2 percent of the 1975 undergraduate students came from outside the geographic area of Surry Community College, yet 32.3 percent of the students graduating moved from the region after completing a degree, an

³Statistical Abstract of Higher Education in North Carolina, 1975-1976, Research Report 1-76 (May 1976) (Chapel Hill: University of North Carolina Press, 1976), p. 29.

⁴A Profile of Former Occupational-Technical Students, Research Report No. 2 (Richmond: Virginia Department of Community Colleges, 1976), p. 16.

analysis of the reasons given for leaving is significant. These reasons will be presented in Table 18, page 75.

Table 17 (p. 74) shows the ranking by programs of student movement to and from the college area. The technical-vocational graduates are ranked from high to low by programs.

Mobility away from the area was ranked before adjusting for leaving to take further education and after adjusting to take further education. Analysis of the data in Table 17 reveals some factors and allows some conclusions regarding mobility away from the Surry Community College geographic area. Business Technologies, Nursing, Electronic Technology, and Drafting and Design Technology ranked first, second, third, and fourth, respectively, in mobility from the Surry Community College area. Business Technologies ranked among the lowest paid graduates. However, the other three program graduates, Nursing, Electronics, and Drafting and Design, were three of the top salaried types of graduates. A logical assumption is, therefore, that Business graduates were seeking higher salaries and the Nursing, Electronics, and Drafting and Design graduates ranked higher in part by their mobility away from the Surry Community College geographic area. The assumption is justified by analyzing the data in Table 18.

As stated earlier, ninety graduates, 32.4 percent, indicated they had moved from the geographic area after completing a program at Surry Community College. Table 18

Table 17

Ranking of Mobility to and from the Surry Community College
Geographic Area from High to Low, Technical-
Vocational Graduates

Moved to Surry Community College Geographic Area	N	From Surry Community College Geographic Area	N	From (Omitting those leaving for further education)	N
Business Technologies	4	Business Technologies	24	Business Technologies	12
Nursing	3	Electronics	17	Nursing	12
Carpentry	2	Nursing	12	Electronics	8
Electronics	1	Drafting and Design	10	Drafting and Design	7
All Others	0	Auto Mechanics	4	Carpentry	3
		Carpentry	4	Welding	3
		Welding	4	Auto Mechanics	1
		Machinist Technology	3	Machinist Technology	1
		Other	12	Other	4

Table 18
Reasons for Leaving the Surry Community College
Geographic Area, Technical-
Vocational Graduates

Reason	N
Husband Transferred	8
Better Employment	34
Full-Time Education	26
Military Service	10
Return to Home Town	8
Desire for Different Area	0
Change Type of Work	0
Recruited by Other Firms	4

shows that eight graduates, 8.8 percent, moved because their spouse was transferred, eight graduates, 8.8 percent, returned to their home town, twenty-six graduates, 28.8 percent, moved for full-time education, ten graduates, 11.1 percent, moved for military service, and four graduates, 4.4 percent, for other reasons.

Table 19 (p. 77) lists the place of residence by states of the graduates who left the Surry Community College geographic area after completing a technical-vocational program. The greatest percentage did continue to reside in North Carolina. A total of sixty graduates, 66.6 percent, who left the area did continue to live in North Carolina. Fourteen graduates, 15.5 percent, moved to Virginia, the nearest neighboring state to North Carolina.

Table 19
 Number of Students and State of Residence after
 Leaving the Surry Community College Geo-
 graphic Area, Technical-
 Vocational Graduates

STATE OR COUNTRY OF RESIDENCE	NUMBER
North Carolina	60
Georgia	3
Virginia	14
Texas	3
Tennessee	1
Florida	1
Germany	2
Vietnam	1
South Carolina	4
Mississippi	1
TOTAL	90

Chapter V

POST-COMMUNITY COLLEGE EDUCATIONAL ACTIVITIES OF COLLEGE PARALLEL STUDENTS

In keeping with the State's purposes, Surry Community College exists in the belief that each student should have the opportunity to reach his/her full potential within society. The college assumes its responsibility to provide students who transfer to other institutions with two years of quality credit courses. The phrase "two years of quality credit courses" implies that students will receive quality education which will permit them to be successful at the institution to which they transfer. Since 1968, 347 students have graduated from the college transfer curriculum at Surry Community College. This chapter will test the assumption that Surry Community College graduates received "two years of quality credit courses" by analyzing the post-community college formal educational activities of the college parallel graduates.¹

The adequacy of the preparation for transferring from Surry Community College to a four-year institution may be considered in several different ways. Perhaps the most

¹Surry Community College Handbook, Vol. VII, 1975-1976, p. 6.

basic consideration is the transferability of credit received at Surry Community College--that is, (1) do the four-year institutions accept credit so that a transfer from Surry Community College can graduate in two years after transferring? (2) How many students receive a degree after transferring from Surry Community College? (3) What are the quality point averages after transfer of Surry Community College graduates? (4) How do Surry Community College graduates evaluate the effectiveness of their preparation for transfer? (5) What is the attrition rate after transfer of Surry Community College graduates?

This research indicates that the majority of Surry Community College graduates transferred to public institutions. From 1966 through 1973, Appalachian State University received the greatest number of transfers. In 1974, only nine students transferred to Appalachian State University and in 1975 only eight students transferred to Appalachian State University. The University of North Carolina at Greensboro received the largest number of transfers for the past two years, 1974 and 1975: eleven in 1974 and thirteen in 1975. Since 1968, forty-nine students have transferred to the University of North Carolina at Greensboro and 116 students have transferred to Appalachian State University at Boone, North Carolina. A total of 193 students, 71 percent, transferred to public four-year institutions as compared to thirty-one students (13 percent) who transferred to private institutions in North Carolina.

Table 20 (p. 81) summarizes the number of college transfer students who did post-community college work at North Carolina four-year institutions.

The findings regarding the type of institutions to which Surry Community College graduates transfer is consistent with findings statewide in North Carolina. In 1968, 482 students transferred to public senior institutions from community colleges.² This number has grown from 482 students in 1968, to 2,071 in the fall of 1975, a 330 percent increase. In contrast, only 147 students transferred from community colleges in North Carolina to private senior institutions.³ This number has grown from 147 students in 1968 to 564 students in 1975, a 284 percent increase. In 1975, 72 percent of all students transferring in North Carolina transferred to a public institution. Of the 238 students transferring from Surry Community College since its beginning, 81 percent transferred to a public institution. Table 21 (p. 82) shows the number of undergraduate transfers to North Carolina colleges and universities beginning in the fall of 1968 and continuing through the fall of 1975.⁴

²Statistical Abstract of Higher Education in North Carolina (Chapel Hill: University of North Carolina Press, 1976), p. 59.

³Ibid.

⁴Ibid., p. 60.

Table 20

Undergraduate Transfers to North Carolina Colleges and
Universities, Fall 1968 to Fall 1975

Type of Institution	Fall 1968	Fall 1969	Fall 1970	Fall 1971	Fall 1972	Fall 1973	Fall 1974	Fall 1975
<u>To Public Senior Institutions:</u>								
From Community Colleges	482	730	988	1,326	1,535	1,698	1,947	2,071
From Private Junior Colleges	1,055	1,020	1,177	1,131	1,113	1,145	1,040	1,067
From Public Senior Institutions	611	743	929	1,059	1,235	1,343	1,400	1,422
From Private Senior Institutions	565	687	695	686	584	668	611	730
From Out-of-State Institutions	1,161	1,260	1,257	1,278	1,159	1,350	1,461	1,462
Subtotal	3,874	4,440	5,046	5,511	5,450	6,096	6,402	6,752
<u>To Private Senior Institutions:</u>								
From Community Colleges	147	164	193	293	395	395	473	564
From Private Junior Colleges	585	511	514	498	491	387	350	430
From Public Senior Institutions	251	283	353	397	401	371	413	442
From Out-of-State Institutions	784	780	771	834	823	886	996	951
From Private Senior Institutions	224	256	204	230	208	208	211	202
Subtotal	1,991	1,994	2,035	2,252	2,318	2,247	2,443	2,589

Table 21
Enrollment in Higher Education

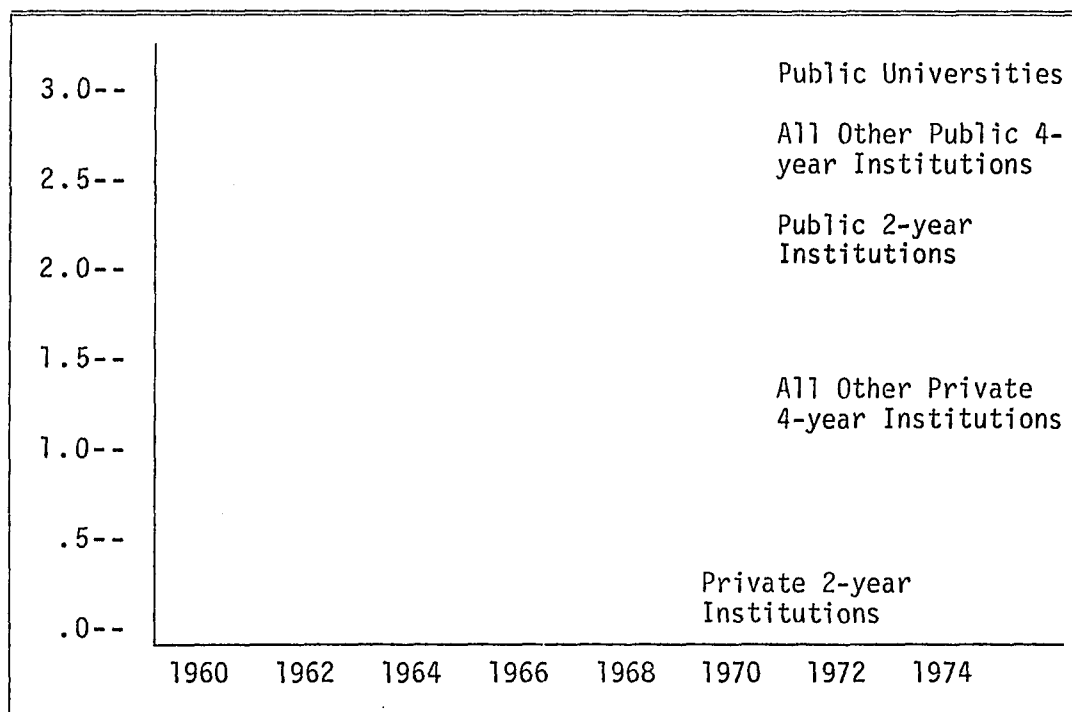


Table 21 shows in graph form that the dramatic growth in enrollment in higher education nationwide since 1960 has been concentrated in public institutions.⁵

According to Leland L. Medsker in his report on attrition, one of the most important considerations in the evaluation of a transfer program is the number of students who transfer and who later receive degrees.⁶ Medsker cited studies which had been conducted on several campuses throughout the United States as examples of this type of evaluation. At the University of Southern California, for example, 67 percent of the native students, as compared to only 48 percent of the transfers, received degrees. In contrast, at the University of Georgia, students transferring to the university from junior colleges in the state system and from outside the state even surpassed the natives in the percentage receiving degrees in the normal period.⁷ At Iowa, there were only negligible differences among the transfer groups in terms of percentages of transfers who received degrees.⁸ Similar studies were also conducted at Kansas University where a higher percentage of native students received a degree, and at the University of

⁵Mary A. Golladag, The Condition of Education (n.p.: n.p., 1976), p. 17.

⁶Leland L. Medsker, The Junior College: Progress and Prospect (New York: McGraw-Hill, 1960), p. 126.

⁷Ibid.

⁸Ibid., p. 129.

Michigan, where 80 percent of the transfers received a degree.⁹

A study at William Rainey Harper College, an institution similar in purpose to Surry Community College, was conducted to determine the number and percent of transfer students receiving degrees after transferring.¹⁰ The study revealed that 62 percent of the 1970 graduates, and 27 percent of the 1972 transfer alumni had earned bachelor's degrees by 1975. Overall, about 80 percent of the transfer alumni had taken at least some other courses since leaving Harper.¹¹

Table 22 (p. 85) shows the number and percent by year of Surry Community College graduates who have received a degree or are working toward a degree for the years 1968-1974. The table reveals that 181 of the 268 respondents had received the bachelor's degree. The master's degree had been awarded to fifteen students and another seventy-six were working toward a degree. Since forty-six of the 268 respondents were graduated in 1975, these graduates will not be considered in determining the percentage who

⁹Ibid., p. 130.

¹⁰John A. Lucas, "Follow-up Study of 1960 and 1972 Alumni," ERIC, 1975, p. 9.

¹¹John A. Lucas, "Follow-up Study of 1970 and 1972 Alumni," Educational Research Information Clearinghouse for Junior Colleges (Berkeley: University of California Press, 1975), p. 9. (Hereinafter Educational Research Information Clearinghouse will be referred to as ERIC.)

Table 22
 Number and Percent by Year Having Received a Degree or
 Working Toward a Degree, College
 Parallel Graduates

Year	Bachelor's Degree Number	Percent	Master's Degree Number	Working Toward Degree
1968	14	.07	0	2
1969	20	.09	4	2
1970	25	.12	2	6
1971	23	.13	2	9
1972	32	.18	3	7
1973	43	.24	2	8
1974	24	.13	0	8
1975*	4	.01	0	34
TOTALS	181	.94	15	76

*Not considered in any totals.

transferred and who eventually received a degree. Therefore, 192 graduates (years 1968-1974) have worked toward a degree; 181, or 94 percent, have received a degree. This compares more than favorably with the extensive Knoell-Medsker study involving more than 7,000 transfer students. In a summary of this study by James H. Nelson in the October 1965 edition of the National Education Association Journal, it was concluded that from 75 percent to 80 percent of the respondents in this study ultimately attained the bachelor's degree.¹²

The number of semester hours taken by the graduates after transferring from Surry Community College to a four-year institution did not vary considerably from one year to another. In fact, the only notable difference from 1968 through 1975 was the 1975 groups who had only completed one year of transfer when the survey was conducted. Table 23 (p. 87) shows the mean number of semester hours of post-community college education as reported by the respondents to the questionnaire.

A particular interest of this research was to determine the reasons for students not transferring to four-year institutions. Thirty students indicated they had never transferred to any institution for training beyond the two years they took at Surry Community College. These

¹²James H. Nelson, "Do Junior College Transfers Make the Grade?" National Education Association Journal (October 1965), pp. 55-57.

Table 23
 Mean Number of Semester Hours of Post-Community
 College Education--College Parallel Students

Year	Number	Mean Number of Semester Hours
1968	17	47.00
1969	27	55.45
1970	32	51.66
1971	23	51.74
1972	37	55.60
1973	57	49.52
1974	29	46.19
1975*	46*	26.20*
TOTAL GROUP	268	51.02

*Excluded from all totals.

reasons are summarized in Table 24, page 89. The reasons were fairly evenly distributed between financial problems, personal problems, a desire to find gainful employment, entering service, and marriage. The majority of the graduates and 30 percent of those who did not transfer checked "wanted to work" as a reason for not transferring. The reasons given by graduates of Surry Community College for not transferring are similar in nature to the two most important reasons given at Bronx City College--financial need and a change of institutions.¹³

In reviewing related literature, it was noted that much had been written regarding the attrition rate of transfer students. The attrition rate of transfer students has become a source for the evaluation of transfer programs. A study conducted by the American Council on Education by E. I. Holstrom and A. S. Bisconti and reported by the American Association of Community and Junior Colleges in a March 1976 bulletin pointed out that about 52 percent of enrolled freshmen in 1968 transferred to a four-year college by 1972. Of the women transfers, 62.5 percent had received the associate degree by 1972; 56.8 percent of the men transfers had received the degree by then. By the fall of 1972, 41.9 percent of the women and 40.3 percent of

¹³"A Follow-up Study of the Academic and Job Experiences of Students Graduating from Bronx City Community College, or Leaving (Before Graduating) during 1973" (Los Angeles: ERIC, 1974), p. 29.

Table 24
Reasons for Not Transferring After Completion of
College Transfer Program

Reasons	Number	Percent
Did Not Feel Adequately Prepared	1	03
Financial Problems	5	16
Personal Problems	5	16
Wanted to Work	9	30
Entered the Service	5	16
Married	4	13
Flight School	1	03
Denied Entry to Appalachian Bachelor of Technology Program	1	03

the men who transferred had received the bachelor's degree.¹⁴

Another study was made of 1,700 transfers from different types of institutions to the three public institutions of higher learning in Iowa. The attrition rate was the same for junior college transfers as for other students. A similar study at the University of Michigan revealed that the attrition rate for transfers was unusually high, 84 percent.¹⁵ Of the 192 graduates (1968-1974) who indicated that they had taken courses after completing the programs at Surry Community College, 181, or 94 percent, indicated that they had received a degree. This would be an attrition rate of only 6 percent.

What reasons were given for not graduating by the eleven students who transferred between 1968 and 1974? Only two students checked that they were inadequately prepared as a reason for failing to graduate after transferring. Personal problems were given as the reason more often than any other item on the questionnaire. Many respondents gave more than one reason for failing to graduate after transferring from Surry Community College. Table 25 (p. 91) summarizes the reasons given by students.

¹⁴"Follow-up and Transfer of Two-Year College Students," American Association of Community and Junior Colleges Bulletin Number 202-293-7050 (March 1976).

¹⁵Leland L. Medsker, The Junior College: Progress and Prospect (New York: McGraw-Hill, 1960), pp. 128-129.

Table 25
Reasons for Failure to Graduate after Transfer

Reasons	Number	Percent
Inadequate Preparation	2	09
Financial Problems	5	23
Personal Problems	8	36
Married	2	09
Service	1	.05
Working	1	.05
Attending Part-time	3	13

The review of related literature also revealed that the length of time required to obtain a degree after transferring is also an important consideration in evaluating a transfer program. Of the 181 students receiving a degree between 1968 and 1974, 145, or 80 percent, were able to complete the degree requirements in two years. Only thirty-six graduates, or 20 percent, took more than two years to complete the degree requirements.

The students who took longer than two years to graduate after transferring gave the following reasons: too much credit was lost in transferring, ten students or 27 percent; inadequate preparation, twelve students or 33 percent; and personal problems, five students or 13 percent.. Table 26 summarizes the reasons given for failing to complete the degree requirements in two years after transferring by the thirty-six graduates who took more than two years to complete the bachelor's degree requirements. By analyzing the reasons given for failing to meet the degree requirements in Table 26, and by analyzing the number of semester hours taken after transfer by Surry Community College graduates in Table 23, it does not appear that Surry Community College graduates were required to take excessive credits in order to graduate. In fact, this was not mentioned as a reason for failing to graduate in two years after transfer by any of the respondents.

In a recent study by the Florida Community College Interinstitutional Research Council, however, it was found

Table 26

Reasons for Failure to Complete Degree Requirements in
Two Years after Transferring--College
Transfer Graduates

Reasons	Number	Percent
Lost Too Much Credit	10	28
Inadequate Preparation	12	33
Personal Problems	5	14
Attending Part-time	3	8
Financial	2	5
Maternity Leave	1	3
Had to Wait for Sequence of Courses	1	3
Changed Majors	1	3
Working	1	3

that many transfer students from community colleges had acquired credit hours excessive of university degree requirements. In order to determine why, transfer students (those with excessive credits) enrolled at Florida State University, the University of Florida, and the University of South Florida during the fall of 1973 were surveyed. They were asked by questionnaire to indicate their perceptions of why they had acquired excessive credit hours. It was found that 60 percent of the excessive credits were attributed to student choices (change of major, options, delay in selecting a major, and inability to schedule required courses when needed). Some 20 percent of the excessive credits were attributed to institutional policies, 8 percent to alleged institutional error, and 12 percent to other reasons. It was concluded from the study that the loss of efficiency from the decentralized baccalaureate program was only 1 percent.¹⁶

Another source used by many researchers to evaluate a transfer program is the cumulative quality point average of graduates after transferring to a four-year institution. This was also an important consideration for this research project at Surry Community College.

¹⁶"Do Community College Transfer Students Have to Take Excessive Credits to Complete Their Baccalaureate Degree?" Internal Research Council News and Notes (Spring 1974).

According to a study at Macomb County Community College, the transfer students' grade-point averages revealed remarkable consistency between performance at Macomb and the four-year transfer institutions. No grade-point averages were given in this study.¹⁷ A summary of the Knoell-Medsker report on transferring, involving over 7,000 transfer students, as reported by James H. Nelson in the National Education Association Journal, revealed that junior college students typically drop about three-tenths of a grade point after transfer. For example, a student whose cumulative junior college grade-point average was 3.3 would be expected to earn about a 3.0 average in his first term following transfer. After this initial drop in grades, however, the performance of transfers improved steadily, rising from an average of 2.27 the first semester to 2.68 the fourth semester.¹⁸ As shown by Table 27 (p. 96), a Surry Community College graduate's cumulative grade-point average is above the averages reported in the Knoell-Medsker study. This research project involving Surry Community College graduates revealed that in only three out of the eight years did Surry Community College graduates' cumulative quality point average, as reported by the

¹⁷Alan Gross, "Where Do the Students Go?" (Berkeley: ERIC, 1975), p. 34.

¹⁸James H. Nelson, "Do Junior College Transfers Make the Grade?" National Education Association Journal (October 1965), p. 2.

Table 27
 Cumulative Grade-Point Averages by Year,
 College Transfer Graduates

Year	Number 0-1.99*	Number 2.00-4.00*	Mean Quality Points
1968		13	3.01
1969		19	3.05
1970		28	2.98
1971		19	2.83
1972	1	33	3.09
1973		47	3.15
1974	1	25	3.08
1975	1	33	2.82

*Intervals.

graduates, fall below the 3.00 level: 2.98 in 1970, 2.83 in 1971, and 2.82 in 1975. Table 27 shows the cumulative quality point average by year of Surry Community College graduates after transferring to a four-year institution.

Several institutions similar in size and purpose to Surry Community College have conducted comparable institutional studies which included a subjective evaluation by the students or by the graduates of the institution. A questionnaire survey of 109 current transfer students from Southern West Virginia Community College was conducted to elicit subjective evaluations of their college experiences with a 43 percent response rate. Students expressed high satisfaction with Southern West Virginia Community College because of small classes and personal attention.¹⁹ A study at Atlantic Community College revealed that 89 percent of the graduates rated Atlantic highly, especially in the area of curriculum and instruction.²⁰

Surry Community College graduates equally expressed a high satisfaction with their educational experience while enrolled at Surry Community College in the college transfer curriculum. Many students attached an extra note to the questionnaire expressing their appreciation to Surry

¹⁹Edwin J. Noland and Donald L. Hall, "A Follow-up Study of Transfer Students from Southern West Virginia Community College to Marshall University: 1967-1972" (Los Angeles: ERIC, 1974), pp. 20-21.

²⁰Kristen Patton, "Survey of Graduates, 1968-1972" (Los Angeles: ERIC, 1974), p. 6.

Community College for their satisfactory experiences. The majority of the respondents indicated that their preparation for transfer was either good or excellent. A total of 109 graduates, or 41 percent, checked "excellent" for the value of their preparation for transfer at Surry Community College. A total of 115 graduates, or 43 percent of the total respondents, checked "good" as the value of their preparation for transfer. The number and percent checking either adequate, fair or poor was very small: forty-four graduates, 16 percent of the total respondents. Table 28 (p. 99) summarizes how the graduates of Surry Community College evaluated their preparation for transfer while enrolled in the transfer program at Surry Community College.

Would the 268 respondents to this questionnaire have attended another college elsewhere had Surry Community College not existed? A total of 168 graduates, 63 percent, stated they definitely would have or probably would have attended another college had Surry Community College not existed. A total of 100 graduates, 38 percent, stated they probably would not or definitely would not have attended another college had Surry Community College not existed.

This chapter has dealt with the aspects of transfer by the Associate in Arts graduates of Surry Community College during the years 1968 through 1975. Of the 347 students graduated in the college transfer program during this time, 268 questionnaires were returned, a return rate of 77 percent. It was found that 192 graduates, 72 percent,

Table 28
Student Assessment of Preparation for Transfer

Value	Number	Percent
Excellent	109	41
Good	115	43
Adequate	28	11
Fair	8	03
Poor	1	01

during the years 1968-1974 had worked toward the bachelor's degree. It was further found that 181 of the 192 graduates who had worked toward the bachelor's degree had finished the requirements for the bachelor's degree, a rate of 94 percent. A total of 145 graduates were able to complete the requirements in two years after transferring, a rate of 76 percent. Only thirty-six graduates, 24 percent, were required to take more than two years to complete their bachelor's degree.

Chapter VI

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Any attempts to interpret the findings and apply them to Surry Community College graduates in general should be preceded by a statement that emphasizes the descriptive nature of this study.

The specific objectives of this research, as stated in Chapter One, were: (1) to determine the scope and type of formal education activities that have taken place after completion of the technical-vocational programs at Surry Community College, (2) to determine if students moved from the Surry Community College area in order to enroll in a particular technical-vocational program, (3) to determine if students moved from the Surry Community College area after attaining a degree in the technical-vocational curriculum at Surry Community College, (4) to describe the economic status of graduates of technical-vocational programs as revealed by the graduates, and (5) to determine the academic success after transfer of college parallel students.

This systematic attempt at evaluating some of the outcomes of the graduates from Surry Community College has yielded substantial and quite useful information. The preceding chapters have set forth some of the characteristics of graduates relative to further schooling, mobility,

and economic success. Over the course of this primarily descriptive effort, certain overall conclusions thus became apparent. Among the more salient ones are these:

1. The overwhelming majority of Surry Community College graduates in the technical-vocational programs entered full-time employment rather than a full-time educational program. Programs which were predominantly female had fewer graduates to enter post-secondary institutions than did programs which were predominantly male, indicating that male graduates in our technological culture feel more need to attain education beyond the associate degree. The predominantly engineering programs of Electronics Technology, Machinist Technology, and Drafting and Design Technology had the largest percentages of graduates taking post-community college credits. It was concluded that this high percentage could be attributed to the early development of Bachelor of Technology Degree programs at the University of North Carolina at Charlotte.

Appalachian State University at Boone, North Carolina, and the University of North Carolina at Charlotte, North Carolina (two institutions with Bachelor of Technology programs) had the largest number of graduates from Surry Community College technical-vocational programs. Policies pertaining to acceptability of vocational-technical course credits are conspicuously absent in statewide pacts. Acceptance is gradually spreading, but primarily on an institutional basis rather than statewide

and primarily in those institutions where baccalaureate degrees have been developed to build on the initial work provided by community colleges and technical institutions. Although the overwhelming majority of graduates enter full-time employment rather than full-time education, the fact that graduates from the engineering programs, who have better opportunities for advance studies because of the development of Bachelor of Technology degree programs at area four-year institutions, indicates that graduates do not necessarily perceive that two years is the optimum time for an occupational program.

Finally, the changing nature of our society requires virtually all citizens to gain new skills and intellectual orientations throughout their lives. Formal education of youth and young adults, once thought of as a vaccine that would prevent ignorance later in life, is now recognized as inadequate by itself to give people all the educational guidance they will need to last a lifetime. The obsolescence of knowledge, the rapid growth of new knowledge, the shifts in national priorities, the multiplication and complexity of social problems, and the close relationship between the application of knowledge and social progress all lead to the conclusion that life long learning is not only desirable but necessary. For those students who wish to enter post-secondary institutions immediately upon high

school graduation, the emphasis on completing degrees in a lockstep should be reduced.¹

2. Electronics Technology, Drafting and Design Technology, and Carpentry ranked one, two, and three in mean present salary and in yearly percent increase in salaries. Surry Community College graduates ranked below the average of the salaries in six selected cities in the United States. Surry Community College graduates also ranked slightly below the average salary of technical education graduates in South Carolina. However, 64 percent of the graduates indicated they were working in the field related to their training.

Surry Community College graduates, in general, felt that their salary was affected by a cost of living index, a salary schedule, or some other variable more so than the type of degree attained. Only sixty-two graduates, 26 percent, felt that their salary was affected by the type of degree earned. However, the positive relationship which did exist between the amount of post-community college education and salary limitations based on the degree attained in drafting and design and electronics would indicate that some graduates saw the advantages and possibilities for upward advancement.

¹Theodore M. Wesburgh, Pamel A. Miller and Clifton R. Wharton, Jr., Patterns for Lifelong Learning (Washington: Jassey-Bass Publishers, 1973), pp. 3-6.

The law of supply and demand is an important variable in any employment analysis. The high salary ranking of drafting and design graduates and nursing graduates could be the result of the demand for these graduates.

3. Surry Community College attracts students predominantly from within its geographic region. A very small number of students moved to the Surry Community College area in order to participate in a technical-vocational program. Only eleven students, 3.9 percent, moved to the Surry Community College geographic area after completing a program.

Graduates of the nursing, electronics, and drafting and design programs were among the highest paid types of graduates. Graduates of the business program were among the types of lowest paid graduates. Of the ninety graduates who left the Surry Community College geographic area, thirty-four graduates, 37.7 percent, moved for better employment. A logical conclusion is, therefore, that business graduates were seeking higher salaries, and the nursing, electronics, and drafting and design graduates received higher salaries and ranked higher in salaries because of their mobility from the Surry Community College geographic area.

4. The majority of Surry Community College liberal arts graduates transferred to public institutions. A total of 193 graduates, 81 percent, transferred to public four-year institutions as compared to only thirty-one graduates,

13 percent, who have transferred to private institutions in North Carolina. From 1966 through 1973, Appalachian State University in Boone, North Carolina, received the greatest number of transfers. Appalachian State University averaged receiving sixteen graduates per year during the eight-year period from 1968 through 1975. In 1974 only nine students transferred to Appalachian State University and in 1975 only eight students transferred to Appalachian State University. The University of North Carolina at Greensboro received the largest number of transfers for the past two years, 1974 and 1975: eleven in 1974 and thirteen in 1975. Since 1968, forty-nine students have transferred to the University of North Carolina at Greensboro and 116 graduates have transferred to Appalachian State University.

The percentage of students who received a degree after transferring from Surry Community College is extremely high. Of the 192 graduates (years 1968-1974) who transferred, 181 graduates, 94 percent, received a degree, an attrition rate of only 6 percent. This compares quite favorably to the extensive Knoell-Medsker study involving more than 7,000 transfer students in which it concluded that 75 to 80 percent of the respondents in the study ultimately attained a bachelor's degree.

The cumulative quality point averages of Surry Community College graduates fell below the 3.00 level in only three of the eight years studied: 2.98 in 1970, 2.83 in 1971, and 2.82 in 1974. Surry Community College

graduates again compared favorably to the 7,000 transfer students in the Knoell-Medsker study where the cumulative quality point averages rose from a beginning semester average of 2.27 to 2.68 the fourth semester.

Surry Community College graduates expressed a high satisfaction with their educational experience while enrolled at Surry Community College in the college transfer curriculum. The majority of the respondents indicated that their preparation for transfer was good or excellent. A total of 115 graduates, 43 percent of the total respondents, checked good as the value of their preparation for transfer. The number and percent checking either adequate, fair, or poor was very small: forty-four graduates, 16 percent of the total respondents. A total of 145 graduates were able to complete the requirements in two years after transferring, a rate of 76 percent. Only thirty-six graduates, 24 percent, were required to take more than two years to complete their bachelor's degree.

As evidenced by the high percentage of graduates receiving a degree, the low attrition rate, and low percentages who required more than two years to complete a bachelor's degree, the high cumulative quality point averages of Surry Community College graduates, the excellent evaluation of their preparation for transfer by the graduate, it is concluded that Surry Community is above average in preparing graduates to transfer to four-year

institutions when compared with the results of the Knoell-Medsker study.

POLICY IMPLICATIONS

It is evident from the conclusions listed above and throughout this study that the concept of technical-vocational education being terminal in nature or that two years is the optimum amount of time for a technical-vocational program needs careful attention and review. Policies pertaining to acceptability of technical-vocational credits are absent in most statewide pacts. Acceptance is gradually spreading, but primarily on an institutional basis rather than statewide and primarily in those institutions where baccalaureate degrees have been developed to build on the initial work provided by community colleges and technical institutes. Fortunately, North Carolina is one of five states where many senior institutions including the major universities accept Associate of Applied Science degrees on an institutional basis. With the emphasis now on life long learning rather than education being terminal in nature, the findings of this research suggest the necessity for North Carolina to develop a statewide plan, not only for transferring college parallel courses but also in transferring technical-vocational courses from one institution to another within the state.

As an outgrowth of this study, it is the feeling of this writer that the findings also suggest the importance

of further evaluation on the availability and effectiveness of placement officers being made a full-time staff position at community colleges and technical institutes, their purpose being to assist in placing technical-vocational graduates and to work with local industry in an effort to upgrade the salary schedule for graduates from technical-vocational programs.

RECOMMENDATIONS FOR FUTURE RESEARCH

This research has demonstrated that for a modest investment, very useful and valuable information can be obtained from recent graduates of a community college or technical institute. Therefore, future research from other similar institutions is desirable. Also, a state-wide follow-up program of graduates from community colleges and technical institutions similar to the comprehensive studies conducted by the Maryland Department of Community Colleges and by the Virginia Department of Community Colleges is desirable.

Finally, more sophisticated research is needed on the data described in this report on a statewide basis involving all technical-vocational graduates throughout the state. The potential exists for dissertation or thesis papers and this possibility should be explored so long as the confidentiality of the respondents is strictly maintained. In particular, the post-secondary educational activities of technical-vocational graduates, mobility of

graduates, and the economic success of graduates would profit from expanded research throughout the state of North Carolina.

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APPENDIXES

APPENDIX A

LETTER TO ACCOMPANY QUESTIONNAIRE

SURRY
COMMUNITY COLLEGE

DOBSON, NORTH CAROLINA 27017
TELEPHONE 386-8121

July 27, 1976

Dear Former Students:

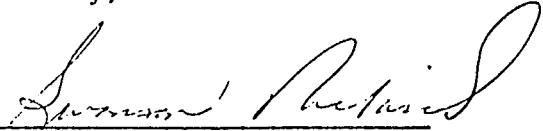
We need your help! We are conducting a study that will involve every person who graduated from Surry Community College since the beginning of the college.

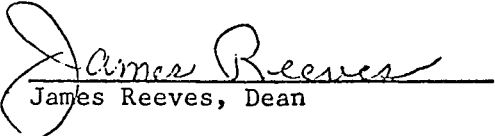
The purpose of this study is to determine how effective your educational experience was at Surry Community College, and how effective the curriculum, courses and instructions were in helping you to reach your goals.

In order for the study to have meaning, we need every graduate to participate. If you will fill out the enclosed questionnaire and return it in the addressed, stamped envelope, we would appreciate it very much.

We are interested in our graduates. If we can be of help to you, please feel free to call on us.

Sincerely,


Swanson Richards, President


James Reeves, Dean

SR/JR:kw

Enclosure

APPENDIX B

PERSONS INTERVIEWED REGARDING PURPOSES AND DESIGN OF
FOLLOW-UP STUDY OF GRADUATES OF SURRY
COMMUNITY COLLEGE

Collins, John K. Director, Technical-Vocational Programs
Lawson, Byron R. Counselor for Technical-Vocational Students
Motsinger, Wayne C. Counselor for Business Students
Richards, Swanson President of Surry Community College
Shepherd, Carlyle M. Counselor, College Transfer Students
Stockton, George E. Dean of Instruction
Strickland, Charles Instructor, Department of Mathematics
Surratt, Carlos P. Dean of Evening Programs

APPENDIX C

QUESTIONNAIRE: SURVEY OF GRADUATES OF TECHNICAL-
VOCATIONAL PROGRAMS, SURRY COMMUNITY COLLEGE

Name _____

Address (if Different from Envelope) _____
Number Street

_____ City State Zip

I. Formal Education Taken after Leaving Surry Community College

A. How much formal education have you taken since leaving Surry Community College?

_____ Semester hours

or

_____ Quarter hours

B. When did you begin the formal education after leaving Surry Community College?

_____ Month Year

C. Where was this work taken? (please check)

1. University of North Carolina, Greensboro ()

2. University of North Carolina, Charlotte ()

3. Western Carolina University ()

4. Appalachian State University ()

5. North Carolina State University ()

6. University of North Carolina, Chapel Hill ()

Others

7. _____

8. _____

9. _____

Major field of study _____

D. Have you received a bachelor's degree? Yes () Date Received

Month Year

Major field of study _____

E. What year did you graduate from Surry? _____

II. Mobility

Geographic area is defined to mean commuting distance to Surry Community College. This would include a 50 mile radius of Surry Community College.

A. Did you move to the Surry Community College geographic area in order to participate in a Technical-Vocational program?

Yes () No ()

B. If answer to A, above, is "yes," where did you live immediately before moving to the Surry Community College geographic area?

C. After receiving your associate degree from Surry Community College, did you move from this geographic area?

Yes () No ()

D. If the answer to C, above, is "yes," what were the reasons for leaving the Surry Community College geographic area? Please check.

1. Better employment ()

2. Husband transferred ()

3. Full-time education ()

4. Military service ()

5. Return to home town ()

6. Other _____

E. If the answer to C, above, is "yes," where have you lived since leaving the Surry Community College geographic area? Start with the time period after receiving your degree from Surry Community College.

III. Vocational Experiences since Leaving Surry Community College

- A. Are you now working in the same field for which you were trained at Surry Community College? (For example, Business Management, Electronics, Mechanics, etc.)

Yes () No ()

- B. Please name or describe the type of job in which you are now involved.

- C. Original salary \$ _____ Check One

Weekly ()

Bi-weekly ()

Monthly ()

Annually ()

- D. Present salary \$ _____ Weekly ()

Bi-weekly ()

Monthly ()

Annually ()

- E. Reasons for any salary increase as perceived by graduates. Check Those That Apply

1. Salary tied to cost-of-living index ()

2. Salary schedule with annual steps ()

3. Promotion and/or increased responsibility ()

4. Other ()

Please describe _____

- F. Is your salary controlled or limited by the type of degree you have attained? (For example, is the holder of 4-year degree eligible for higher salaries when compared with recipients of a 2-year degree?)

- G. Describe the type of salary structure (hourly wage, salary, salary plus commission, etc.)
-
-

- H. How well did the specialized courses at Surry Community College prepare you for successful work? (By specialized courses, we mean those in a Technical-Vocational field)

Excellent preparation	()
Good preparation	()
Adequate preparation	()
Fair preparation	()
Poor preparation	()

QUESTIONNAIRE: COLLEGE PARALLEL

A. Personal Information

1. Name _____

2. Address (if different from envelope)

Number

Street

City

State

Zip

3. Program of study at Surry Community College _____

4. What year did you graduate from Surry Community College? _____

B. Formal Education after Leaving Surry Community College

1. How much formal education have you taken since leaving Surry Community College?

_____ Semester hours

_____ Quarter hours

2. Name of college or university _____

3. Have you received a bachelor's degree? Yes () No ()

Major Field of Study _____

4. Have you received a master's degree? Yes () No ()

Major Field of Study _____

5. Are you working toward a degree? Yes () No ()

Type _____

Major Field of Study _____

6. Were you able to complete your bachelor's degree in two years after transferring? Yes () No ()

7. What is/was your quality point average at the senior institution to which you have transferred?

8. If you did not transfer after completing your program at Surry, please check one of the following:

- A. Did not feel adequately prepared
- B. Financial problems
- C. Personal problems
- D. Wanted to work
- E. Entered the Service
- F. Other (list) _____

9. As far as preparing me for transfer, the following describes the value to me of my experience at Surry Community College:

- A. Excellent preparation
- B. Good preparation
- C. Adequate preparation
- D. Fair preparation
- E. Poor preparation

10. If Surry Community College did not exist, would you have attended college?

- Definitely yes
- Probably yes
- Probably no
- Definitely no

11. If you transferred and failed to graduate, please check one of the following:

- A. Inadequately prepared for transfer
- B. Financial problems
- C. Personal problems
- D. Other (list) _____

12. If you were unable to complete your degree in two years, please check one of the following:

- A. Lost too much credit
- B. Inadequately prepared
- C. Personal problems
- D. Other (list) _____

APPENDIX D
FIRST FOLLOW-UP LETTER

SURRY
COMMUNITY COLLEGE

DOBSON, NORTH CAROLINA 27017
TELEPHONE 386-8121

July 28, 1976

Dear Former Student:

We recently mailed out a questionnaire to all people who have graduated from Surry Community College.

As stated in our previous letter to you, the purpose of this study is to determine how effective your educational experiences were at Surry Community College, and how effective the curriculum, courses and instructions were in helping you to reach your goals.

To date, we have not received your questionnaire. In order for this study to have meaning, we need a returned form from every student. Please complete the questionnaire and return it in the stamped envelope that was sent to you with your original letter.

If you have misplaced the first one, please feel free to phone or write for another one.

Sincerely yours,


James M. Reeves
Dean

JMR:kw

APPENDIX E

LETTER OF ENDORSEMENT FROM SURRY COMMUNITY
COLLEGE BOARD OF TRUSTEES

SURRY
COMMUNITY COLLEGE

DOBSON, NORTH CAROLINA 27017
TELEPHONE 386-8121

July 13, 1976

Mr. James M. Reeves
Dean of Student Personnel
Surry Community College
Dobson, NC 27030

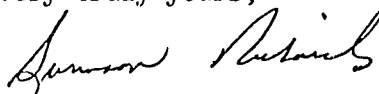
Dear Mr. Reeves:

At their regular meeting on Monday, July 12, 1976, the Surry Community College Board of Trustees unanimously endorsed your research project. Members were quite interested in learning the results of the project as they would relate to the various purposes of the college as adopted by the Board at previous sessions.

The unanimously approved endorsement is as follows.

The Board of Trustees of Surry Community College unanimously endorses the research project to be conducted by James Reeves, Dean of Student Personnel. The Board looks forward to the results of the project as a valuable and accurate measure of the performance of the graduates of the institution, which is a major concern of the Board.

Very truly yours,



Swanson Richards
President

APPENDIX F
LETTER OF ENDORSEMENT



DEPARTMENT OF
COMMUNITY COLLEGES
NORTH CAROLINA STATE BOARD OF EDUCATION
RALEIGH 27611

BEN E. FOUNTAIN, JR.
STATE PRESIDENT

919-829-7051

July 16, 1976

Dear Dr. Bryson:

Mr. James M. Reeves, Dean of Student Personnel Services at Surry Community College, has informed me of the research project which he has proposed for a doctoral dissertation.

I endorse this research project which will deal with the objectives and purposes of the community college system and with the purposes of one particular institution within the system. Of course, I understand that a dissertation must also conform with the standards of the University.

The research is significant in that other institutions within the community college system may be able to use this research as a model for follow-up studies.

I look forward to reviewing the results of this study if it is approved.

Sincerely,

A handwritten signature in cursive script that reads "Ben E. Fountain, Jr.".

Dr. Joe Bryson
Professor of Education
University of North Carolina
at Greensboro
Greensboro, NC 27420

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BEF/gcw