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ABSTRACT

A study that investigated variables associated with the transfer process and the academic performance of students of the Lehigh County Community College (LCCC) who transferred to 4-year institutions during a defined fourteen and one-half month period is summarized. Information was sought as to colleges attended by the LCCC transfers, the validity of the findings of a previous study as to mean grade point average at both LCCC and the receiving schools, data on 11 variables for LCCC students enrolled at 75 colleges and universities, and the prediction of academic success of LCCC students at the transfer institutions. The results and their implications are noted, and the study data are tabulated. (DB)

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**Summary of A Study To Determine The Factors That Influence A Student's
Ability To Transfer Successfully From Lehigh County Community College**

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JC 740 364

A recent study thoroughly investigated variables associated with the transfer process, and the academic performance of students of the Lehigh County Community College (LCCC) who transferred to four-year institutions during a defined 14½ month period (May 13, 1971 to August 30, 1972).

The first area of investigation sought to ascertain important data regarding the transfer process. It was found that a total of 1,643 transcripts were sent to 278 different receiving institutions during the defined time period. Two hundred and forty-two (242) schools agreed to participate in this study by reporting their admissions decision on each student who had applied to their respective schools. Results indicate that 79% of the applicants sought admission to Pennsylvania Colleges, while 21% applied to out-of-state colleges. Of the applicants to Pennsylvania colleges, 42% applied to state colleges and 37% to other Pennsylvania colleges. Both types of Pennsylvania schools accepted approximately 70% of the applicants, while the out-of-state institutions accepted only 52% of the applicant group. The follow-up data showed that, in turn, 63% of the students accepted by Pennsylvania state colleges enrolled, 61% of the students accepted by other Pennsylvania colleges enrolled, and 39% of the students accepted by out-of-state colleges enrolled. It should be noted that the data also revealed that every student who achieved a 2.00 average or higher while in attendance at the LCCC was admitted to a senior college. Table A reflects the institutions in which, and the frequency with which, LCCC students enrolled. In summary, these data suggest the probability for admission is much greater to Pennsylvania institutions, whether state colleges

or other types, than is the probability for admission to out-of-state institutions. In addition, once admitted, LCCC transfer students will elect to attend Pennsylvania schools with much greater frequency. Lastly, the probability for admission to four-year colleges is excellent for students who maintain a grade point average of 2.00 or higher while attending the LCCC.

A second important area of investigation was a replication of a study done by Ms. Pat Young, former transfer counselor at the LCCC. An attempt was made to validate the findings of the earlier study. Young's study was conducted on a different sample of students who attended the LCCC during an earlier epoch. As can be seen in Table B, the consistency of the findings of the two studies is striking. However, a difference worth noting is the grade point differential (difference between LCCC grade point average and the transfer institution grade point average), which commonly is inferred to be the phenomenon of "transfer shock", dropped from $-.30$ in the former study to $-.10$ in the present investigation. In brief, among recent students, the mean grade point average at both LCCC and the receiving schools virtually is identical.

A third phase of this study concerned a sample of 316 former LCCC transfer students enrolled at 75 colleges and universities, who completed a minimum of 12 semester hours at both LCCC and at their transfer institution. There were 242 males (77%) and 74 females (23%) who met the above definition. Data were collected on 11 variables for each student; namely, ACT composite score, high school rank, LCCC graduate or nongraduate, type of program enrolled in at LCCC (AA or AAS), semester hours completed at LCCC, semester hours completed at transfer institution, grade point average at LCCC, and

the grade point average at transfer institution. The averages computed for these 11 variables show that the mean age of transfer students is 24; there were more than three times the number of males who transfer than females; there were approximately the same percent of students who transferred after achieving an Associate degree as there were students who transferred without the degree; 14% of the students who transferred were enrolled in an Associate in Applied Science Degree program of studies at LCCC; the average number of semester hours completed at LCCC before transferring was 51, while the average number of semester hours that transferred was 48, an average loss of only 3 credits; the average number of semester hours completed at the transfer institution at the time the data for this study were collected was 38; the mean grade point average achieved at LCCC before transferring was 2.72; and the mean grade point average at the transfer institution was 2.62. Especially noteworthy is the finding that as many students successfully accomplish transfer without an Associate Degree as do with the degree. In other words, many students who successfully meet their objectives at the LCCC often are included in the attrition statistics of the college, simply because they choose to transfer before completing their degree requirements.

Another area of investigation involved the prediction of the academic success of LCCC students at the transfer institutions, using the transfer institution grade point average as the dependent variable and the 10 other

1. the older a student is the greater the likelihood that he/she will be academically successful at both the LCCC and at the transfer institution. In other words, there is a high degree of correspondence between age and academic achievement as it is measured by grade point average.

2. academic achievement in the past was found to be associated with achievement in the present as manifested in the following significant statistical relationships:
 - a. High School Rank in Class and ACT Composite Scores
 - b. ACT Composite Scores and Transfer Institution Grade Point Averages
 - c. ACT Composite Scores and LCCC Grade Point Averages
 - d. High School Rank in Class and LCCC Grade Point Averages
 - e. High School Rank in Class and Transfer Institutions Grade Point Averages
 1. LCCC Grade Point Averages and Transfer Institutions Grade Point Averages.

While the correspondence between past and present achievement is strong, it is important to note that many students who would not have been successful in gaining admission to four-year institutions directly from high school actually transferred and performed satisfactorily after the community college experience. Of the 316 students in the sample, Table C indicates that at least 162 students, or 52% of the sample, had ranked in the lowest three quintiles of their high school graduating classes.

Several other statistically significant linear relationships are of interest; namely, the higher the ACT composite scores the higher the number of credits transferred, the higher the LCCC grade point averages the higher the number of credits transferred, and graduates received more transfer credits, proportionally, than did non-graduates of the LCCC.

Lastly, a step-wise multiple regression performed on the same sample revealed that the best predictors of academic success at the transfer institutions were LCCC grade point averages, age, and high school rank, in that order.

Recommendations

The first recommendation deals with informing students of the results of this study in individual and group counseling sessions. Students must be informed about the differences between their chances of being accepted within the state of Pennsylvania and out-of-state. The admissions' decisions made by out-of-state colleges indicate that interested transfer students should consider several alternative institutions in addition to their out-of-state preference. If the student is provided with this information and is encouraged to apply to several institutions, the risk of not being accepted by out-of-state colleges will be alleviated to some degree. The acceptance pattern of receiving institutions should be communicated to all transferring students.

Every year between 50 to 70 representatives from college and universities visit LCCC for recruitment purposes. Often the representatives inquire about the number of students interested in their institutions. The admission and application information of this study should be used to provide answers to such questions. Before this study there were no specific data concerning the numbers of students who applied, the rate of acceptance, or information about who enrolled in the various institutions. This information also can be used in planning the senior college catalog collection in the Career and Transfer Library.

Students should be apprised of the fact that they are more likely to receive more advance¹ credit by senior institutions if they achieve higher grade point averages at LCCC and if they achieve an Associate Degree.

Of course, the public, and the receiving institutions, should be informed of the findings of this study because of the many misconceptions which abound regarding the transfer process, and the success of our students after they transfer.

Another recommendation is that more cooperation between community colleges and senior institutions must be fostered. Obtaining the data used in this study was not a simple matter. Students nor senior colleges are obligated to furnish records to the community college. Extensive follow-up efforts were necessary in order to collect the information. Since there is a growing interdependence between community colleges and senior institutions, the receiving schools should support the research efforts of community colleges, and vice versa. Senior institutions should readily provide to community colleges academic transcripts of their former students, requiring that the community colleges guarantee confidentiality, but a policy that is rigidly applied poses a barrier to meaningful and necessary follow-up research.

Lastly, there is a dearth of follow-up research dealing with Pennsylvania community college transfer students. Since there is a great need for this research by educators, legislators and other persons, a state-wide study is recommended which would include all student transfers from community colleges. Such a project could provide needed information about this newest institution of the Pennsylvania system of higher education. Presently there is a cooperative project underway between the transfer counselors of the 14 Pennsylvania community colleges and the Pennsylvania Division of Higher Education Research. The main purpose of the proposed project is to ascertain whether or not the 1973 state articulation policy has been implemented by the state's colleges and universities. In addition, steps are being taken to have the senior institutions report the acceptances

of transfer students directly to the state. Such an approach would enable community colleges to prepare reports without uncertainty and continual and intense follow-up. Ultimately, it would be efficient to establish a central clearinghouse in the state for articulation between all community colleges and senior institutions.

Table A

TABLE OF LCCC TRANSFER STUDENTS ENROLLMENT
AT OTHER EDUCATIONAL INSTITUTIONS

Pennsylvania State Colleges (310)

Bloomsburg State College	(54)
California State College	(6)
Clarion State College	(1)
East Stroudsburg State College	(63)
Indiana University of Pennsylvania	(4)
Kutztown State College	(117)
Lock Haven State College	(7)
Mansfield State College	(29)
Millersville State College	(13)
Shippensburg State College	(8)
Slippery Rock State College	(2)
West Chester State College	(6)

Other Pennsylvania Colleges (261)

Academy of the New Church	(1)
Albright College	(3)
Allentown College of St. Francis DeSales	(7)
Alliance College	(1)
Alvernia College	(1)
Bethlehem Business	(1)
Cabrini College	(1)
Cedar Crest College	(10)
Delaware Valley College	(4)
Drexel University	(1)
Easton Hospital (Nursing)	(2)
Ford School of Business	(1)
Geneva College	(1)
Grove City College	(1)
Gwynedd-Mercy College	(1)
Keystone Junior College	(3)
Kings College	(6)
Lafayette College	(7)
LaRoche College	(1)
Lehigh University	(20)
Luzerne County Community College	(1)
Manor Junior College	(1)

Table A (con't.)

Other Pennsylvania Colleges (Cont.)

Moravian College	(26)
Muhlenberg College	(14)
Northampton Area County Community College	(25)
Pennsylvania State University (Allentown)	(2)
Pennsylvania State University (Capitol Campus)	(29)
Pennsylvania State University (Gulph & Hinderson)	(1)
Pennsylvania State University (Main Campus)	(26)
University of Pennsylvania	(1)
Philadelphia College of the Bible	(1)
Philadelphia College of Pharmacy and Science	(1)
Pittsburgh Institution of Mortuary Science	(1)
Point Park College	(2)
Reading Area Community College	(1)
Sacred Heart Hospital School of Nursing	(1)
St. Lukes School of Nursing	(1)
University of Scranton	(1)
Spring Garden College	(7)
Temple University	(28)
United Wesleyan College	(1)
Widener College	(1)
Wilkes College	(4)
Williamsport Area Community College	(8)
York College	(4)

Out-Of-State Colleges (100)

Ambassador College (Texas)	(1)
Ambassador College (California)	(1)
American University	(3)
Antioch College	(1)
Appalachian State University	(1)
Arizona Western College	(1)
Boston University	(1)
Bowling Green State University	(1)
Bradley University	(1)
Brandywine College	(1)
Brigham Young University	(2)
Brooks Institute	(1)
Boward Community College	(1)
California Polytechnic State University	(1)
University of California (Los Angeles)	(1)
Catawba College	(1)
Chaminade College of Honolulu	(1)
Clemson University	(1)
Colorado State University	(1)
University of Colorado (Denver)	(1)
Covenant College	(1)
County College of Morris	(1)

Table A (con't.)

Out-Of-State Colleges (Cont.)

David and Elkins College	(1)
University of Dayton	(1)
Datona Beach Junior College	(1)
Drake University	(1)
El Camino College	(1)
El Centro College	(1)
Fashion Institute of Technology	(1)
Florida Atlantic University	(1)
Fort Lauderdale University	(1)
George Washington University	(1)
Hagerstown Junior College	(1)
University of Hawaii	(2)
Indiana University	(1)
Johnson & Wales College	(1)
Laramie County Community College	(1)
Loretto Heights College	(1)
Los Angeles Harbor Junior College	(1)
University of Maine (Orono)	(1)
Manhattan Community College	(1)
Maryland Institute of Art	(1)
University of Maryland Law School	(1)
Meredith College	(1)
Metropolitan State College	(1)
University of Miami	(3)
Midwestern University	(1)
Milwaukee School of Engineering	(1)
Mitchell College	(1)
University of Montana	(1)
National College of Chiropractic	(1)
University of New Mexico	(3)
New York City Community College	(1)
New York University	(1)
University of North Carolina	(1)
Northern Arizona	(1)
Old Dominion University	(2)
Pace College	(1)
Palmer College of Chiropractic	(1)
Pasadena City College	(1)
Rider College	(4)
St. Joseph's College	(1)
St. Memrad's College	(1)
Santa Monica College	(1)
University of South Carolina	(1)
South Dakota State University	(1)
University of South Florida (Tampa)	(2)
Southeastern Massachusetts University	(1)
Southeastern State College	(1)
State University of New York (Binghamton)	(1)
SUNY College of Environment Science and Forestry	(1)

Table 2 (con't.)

Out-Of-State Colleges (Cont.)

Syracuse University	(1)
University of Tennessee	(1)
Texas A & M University	(1)
University of Texas	(1)
Texas Women's University	(1)
University of Utah	(1)
Valdosta State College	(1)
Virginia Commonwealth University	(1)
VA Polytechnical Institute and State University	(1)
Wayne Community College	(1)
West Virginia University	(2)
West Virginia Wesleyan College	(1)
Wilmington College	(2)
Yankton College	(1)

Table B

Comparison of Six Variables Made between the 1972 LCCC Transfer Follow Up Study (Young) and the Present Study

	<u>Young's 1972 Study</u>	<u>Present Study</u>
Number of Students in Sample	229	316
Number of Institutions	54	75
Mean Semester Hours Completed at LCCC	54	51
Mean Semester Hours Completed at Transfer Institution	51	38
Mean Age	24	24
Mean Act Composite Score	19	17
Mean Grade Point Average at LCCC	2.73	2.72
Mean Grade Point Average at Transfer Institution	2.43	2.62

Table C.

High School Rank in Class of Males and Females

	Male		Female		Total	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Upper fifth	6	2	13	4	19	6
Second fifth	25	8	14	4	39	12
Middle fifth	39	12	10	3	49	15
Fourth fifth	49	16	11	4	60	20
Lowest fifth	50	16	3	1	53	17
Unknown	73	23	23	7	96	30
Totals	242	77	74	23	316	100

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