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ABSTRACT

In this study of the extensiveness of impact, as measured by number of academic courses terminated, of selected self-related factors on student attrition, 1802 subjects, 1142 males and 660 females, comprised the sample. The factors investigated were: within-district/out-of-district residence; part-time/full-time enrollment status; and sex. Each factor was used as an independent criterion measure for classifying students according to the variable response categories (male/female, part-time/full-time, within-district/out-of-district), and an evaluation was made as to empirical variation between factor subgroups. The criterion measure of attrition used was a statistical tabulation of curriculum course withdrawals during the Fall Semester 1972 by the entire sample of students who enrolled during the Fall Semester 1971. Five statistical analyses were conducted. Results of the study show that there are significant differences in attrition rates for students classified according to place of residence relative to the number of courses terminated. It was also found that student attrition is higher among part-time as compared with full-time students. The majority of female students (79%) terminated only one or two courses prior to institutional withdrawal, whereas 59% of the male students exhibited a similar tendency. It was also found that enrollment status does affect the sex factor in student attrition. Although women exhibit a lower tendency than men to terminate their entire program prior to institutional withdrawal, enrollment status is an intervening factor. Finally, it was found that 36% of the total student population did not return. Tables present the statistical data. (DB)

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1971-1972 STUDENT ATTRITION:
ANTECEDENT AND CONSEQUENT FACTORS

UNIVERSITY OF CALIF.
LOS ANGELES

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Introduction

Student attrition has been the subject of an extensive body of research literature for many years, but the phenomenon--characterized in such terms as "dropout," "student mortality," and "academic failure"--is not yet uniformly defined. Whatever the definition, the concept of student attrition, with its widespread ramifications in the educational and social realms, transcends the more personal psychology of the individual. It is a phenomenon which highlights a fundamental premise of symbolic interaction theory--the interaction of the student within an individual-group-setting relationship as the framework for personal structuring of verbal and non-verbal behavioral outcomes. Therefore, intensive investigation of the problem of student attrition is one of the great contemporary issues of public higher education--an issue extended recurrent consideration in terms of manifest institutional goal objectives of comprehensive two-year colleges toward salvage, redirection, and retention of students from diverse ability, achievement, and socioeconomic subcultures of American society.

The study of student attrition, its causes and ramifications, cannot be conducted in isolation but must be related to the entire educational structure. Institutional engagement in research on attrition has three major source-points. First, there is a persistent underlying concept that the comprehensive community college is organized as a training center rather than a general education center. The community college is designed by objective to qualify youth for careers in business and industry, in science and technology, or in paraprofessional occupational fields. In this tradition, when students fail to follow a "normative" track of institutional tenure in the community college, disappointment and hostility are frequently directed at the college--the college, regardless of the quality of its teaching, has failed to

accomplish a fundamental tenet of its institutional mission to salvage, redirect, and retain a diverse student aggregate.

Secondly, interest in student attrition has been stimulated by the marked increase in size and complexity of public community colleges. As the comprehensive community college has experienced manifest institutional growth in curriculum programs, enrollment, facilities, and finance, it has inevitably acquired a full-time staff of professional administrators and non-academic personnel. A primary responsibility ascribed to administrative personnel is the coordination of overall institutional operations or what in many colleges is known as "efficiency control." In terms of the premium placed by educational administrators on efficiency and accountability, the extent of student attrition constitutes one measure of the efficiency of an educational institution--a phenomenon documented throughout the literature relevant to attrition as for both students and colleges, withdrawals are often viewed as representative of a loss of time, energy, and resources (Sheider, 1939; Dressel, 1943; MacIntosh, 1948; and Astin, 1972).

A third reason for burgeoning interest in the study of attrition is realized in the truism that financial resources are relinquished from the income side of an institutional budget as students withdraw from the community college. Irrespective of the nature and magnitude of other income sources, the comprehensive public community college depends heavily on student fees and state appropriations on a per student basis for unrestricted income with which to meet operating expenses. When student attrition is high, the institutional budget, typically under strain, may be unable to balance expenses, and as a result, there is increased concern over student attrition. Therefore, in terms of the economic importance ascribed to student attrition, colleges and universities have attempted to identify specific personal factors,

patterns of family influence, institutional characteristics, and achievement factors which may determine withdrawal tendency.

Review of the Literature

Administrative and economic concerns underlying expanded institutional interest in student attrition have generated considerable research in kind although much of the work to date consists of tabulation, statistical analyses, and actuarial study based on institutional records and related data. There have been a large number of investigations of attrition rate by type of college, size of graduating high school class, and age of entering student (Dwyer, 1939; Coffey, 1940; Hilton and Carpenter, 1943; Mercer, 1943; Dressel, 1954; Farnsworth, 1955; Iffert, 1956; Astin, 1972). There have also been a series of studies addressed to the problem of attrition in terms of investigation of the extent of correlation between "length of persistence" and high school grades, aptitude and achievement test scores, family financial status, illness and injury, motivational factors, and countless other variables (Strong, 1933; Dressel, 1943; Weigand, 1951; Thompson, 1953; Farnsworth, et.al., 1955; Rust and Ryan, 1955; Summerskill and Darling, 1955; Iffert, 1957; Suddarth, 1957; Eckland, 1964; and Astin, 1972).

The majority of attrition studies tend to be parochial--a phenomenon which is indicative of the research concern of recent investigations toward problems associated with student mortality in single institutions or individual states. However, a small number of investigations have dealt with the study of student subgroups from different types of institutions throughout the nation. Trent and Medsker's broadly based study, for example, included students enrolled in two-year junior colleges, four-year colleges and universities, as well as high school graduates not attending college.

Certain social factors involved in attrition such as specific patterns of family influence and socioeconomic background were differentiated for each group while personal characteristics such as native ability and financial status were seen to distinguish persisting from non-persisting students in various institutional settings. Other national studies (Iffert, 1957; Astin and Panos, 1969; Astin, 1972) present similar evidence relative to a large battery of factors that have been isolated as contributing factors involved in student attrition. Therefore, although sufficient quantitative material is available relevant to student attrition, one concern remains paramount in each investigation: methodological defects are evident due to incomplete sampling of institutions, inadequate student input data, and complete reliance on inaccurate student data made in response to mailed questionnaires. In addition, most studies are dated as the majority of findings were attained in the low visibility period of institutional research from 1957 to 1965.

On the basis of a review of the available literature relative to student attrition, causative agents involved in attrition can be grouped in terms of self-related and college-related factors. Although this scheme is adapted primarily for the purpose of simplicity in classification, it is important to note that "external impinging forces" such as community expectations, budget restrictions, and federal guidelines, are not removed from detailed consideration. Rather, they are set aside as a separate grouping of interests over which neither the student nor the institution can exert much control.

Self-related factors in attrition are comprised of individual and group variables such as actual and perceived student ability, socioeconomic background, and motivation toward college--all interdependent factors related in what is vicariously known as a "variable complex." Previous research has shown native ability to be

inconclusive as a determinant of persistence while perceived ability appears to be an indicator of motivation (Summerskill, 1962; Hakanson, 1967; Trent and Medsker, 1968). Family influence and expectations and previous school experience quite evidently are factors of decided importance for persistence at any institution. In this sense, the factor most significantly related to entrance and persistence in college is motivation. Data excerpted from recent developmental literature in sociology and psychology also indicates that motivation is formed early in life, probably largely in response to parental influence and early school experience (Clark, 1964; Corwin, 1968; Trent and Medsker, 1968). Therefore, while ability and family background must be accepted as pre-conditions for college persistence, there is no measurable index of the extensiveness of educational incentive and stimulation as factors involved in college persistence.

College-related factors are those influences which bear on the student after he enters the college community. Existing as a composite of relationships between the self and interpersonal friendship groups, faculty, administrators, curriculum, and institutional norms, in which expectations are tightly interwoven, college related factors are more difficult to evaluate. For example, the persister and non-persister may initially be distinguished in terms of relative success in adapting to the institutional climate, in establishing satisfactory interpersonal relationships, and in adjusting goals to physical and socio-cultural realities of the stimulus situation at hand. As was previously indicated, however, continued motivation toward a college degree appears to be an essential ingredient for student persistence within most, if not all, institutional environments.

This study is based on data obtained from students enrolled in member colleges of the Metropolitan Junior College District for the Fall Semester 1971 who did not

reenroll for the Spring Semester 1972. These students, enrolled in a number of different occupational and transfer curriculum programs, included part-time students, full-time students, within-district students, and out-of-district students. The major objective of this study was to determine the extensiveness of impact (as measured by number of academic courses terminated) of selected self-related factors on student attrition. The factors under investigation were the following: within-district/out-of-district residence; part-time/full-time enrollment status; and sex. Each factor was utilized as an independent criterion measure by which students could be classified according to variable response categories (e.g., male/female, part-time/full-time, within-district/out-of-district) and an evaluation made as to empirical variation between factor subgroups.

Method and Procedure

A subgroup of 1802 subjects, 1142 males and 660 females, comprised the sample of the study. In addition to sex, subjects were also classified according to residence status (within-district, out-of-district, and out-of-state) and enrollment status (full-time/part-time). The criterion measure of attrition used in this study was a statistical tabulation of curriculum course withdrawals executed during the Fall Semester 1972 by the entire sample of students who were enrolled during the Fall Semester 1971 but did not return for the Spring Semester 1972. This made it possible to define attrition in terms of a quantitative and qualitative dimension. On the one hand, attrition in a quantitative dimension is defined as the complete withdrawal of the student from the institutional environment (i.e., the student does not reenroll for the second semester following the semester of initial enrollment). On the other hand, attrition, when viewed in a qualitative dimension, is defined in terms of the

specific number (one, two, three, or four) of curriculum course withdrawals executed by students prior to final termination of college enrollment. In this way, the concept of attrition can be interpreted in functional terms as a two-stage phenomenon inclusive of separate analyses for (1) total institutional withdrawal and (2) the extensiveness of curriculum course withdrawal as a pre-determinant factor relative to total institutional withdrawal.

To evaluate the variable status of sex, residence, and enrollment classification as factors which may account for variation in student attrition, four statistical analyses were employed:

1. Number and percentage of student institutional withdrawals in member colleges of the junior college district were tabulated according to residence and number of curriculum courses terminated.
2. Number and percentage of student institutional withdrawals at Longview, Maple Woods, and Penn Valley Community Colleges were tabulated relative to enrollment classification (full-time/part-time) and number of curriculum courses terminated.
3. Number and percentage of student institutional withdrawals in the Metropolitan Junior College District were tabulated according to sex and number of curriculum courses terminated.
4. Number and percentage of student institutional withdrawals in member colleges of the junior college district were tabulated relative to enrollment status (full-time/part-time), sex, and number of curriculum courses terminated.

A fifth analysis was conducted in terms of the percentage attrition of the total college population at each member college of the Metropolitan Junior College District. Specifically, this analysis was broken down according to the total number and percentage of non-returning students between fall and spring semesters of the 1971-1972 academic year as compared to the number and percentage distribution of non-returning students who received withdrawal course grades. In this way, it was

possible to contrast the quantitative concept of attrition (numerical attrition) with the specialized or qualitative concept of attrition (categorical attrition).

Results

A prevailing concern among two-year college personnel during the past several years has been the determination of whether or not place of residence (within-district; out-of-district; out-of-state) affects the percentage attrition rate of college students. Specifically, the question has been advanced: Are there significant manifest differences in attrition rates of within-district, out-of-district, and out-of-district students? The results shown in Table I indicate that there are significant differences in attrition rates for students classified according to place of residence when analysis is focused upon the relative number of courses terminated. For example, it is readily observable that in each college of the district students who commute from out-of-district residence terminate a greater number of curriculum courses (i.e., three to four) during the length of a semester than do students who commute from a within-district residence. Quite to the contrary, however, it is interesting to note that ascending and descending scales are in effect for each institution when attention is turned to the percentage distribution of attrition rates (i.e., attrition rate in terms of number of courses terminated) at Longview, Maple Woods, and Penn Valley Community Colleges. On the one hand, Longview Community College evidences the lowest attrition rate (60 percent) in terms of students terminating one or two courses while Maple Woods and Penn Valley follow with 66 and 71 percent respectively. On the other hand, Penn Valley Community College shows the lowest attrition rate (29 percent) among students terminating three or four courses during the semester whereas Maple Woods and Longview Community Colleges indicate a somewhat

Table I. Curriculum Course Withdrawals and College Attrition Among Students Classified According to Residence: Fall Semester 1972

College	Within-District		Out-Of-District		Out-Of-State	
	N	%	N	%	N	%
<u>Longview</u>	(Total College N=2485)		(Total College N=197*)		(Total College N=7)	
Courses Terminated	1 200	41%) 60%	12	28%) 48%	1	100%
	2 94	19%)	10	24%)	-	--
	3 64	13%) 40%	7	17%) 48%	-	--
	4 135	27%)	13	31%)	-	--
TOTAL	493	100%	42	100%	1	100%
Percentage Attrition of Total College N	20%		21%		14%	
<u>Maple Woods</u>	(Total College N=1326)		(Total College N=402)		(Total College N=3)	
Courses Terminated	1 126	45%) 66%	30	41%) 60%	0	--
	2 57	21%)	14	19%)	0	--
	3 30	11%) 34%	15	20%) 40%	0	--
	4 65	23%)	16	20%)	0	--
TOTAL	278	100%	*75	100%	0	--
Percentage Attrition of Total College N	21%		18%			
<u>Penn Valley</u>	(Total College N=4371)		(Total College N=209)		(Total College N=117)	
Courses Terminated	1 399	47%) 71%	19	46%) 64%	9	50%
	2 206	24%)	7	17%)	7	39%
	3 95	11%) 29%	5	12%) 36%	0	--
	4 154	18%)	10	24%)	2	11%
TOTAL	854	100%	41	100%	18	100%
Percentage Attrition of Total College N	20%		20%		15%	
<u>District</u>	(Total District N=8182)		(Total District N=808)		(Total College N=127)	
Courses Terminated	1 725	44%) 66%	61	39%) 59%	10	53%
	2 357	22%)	31	20%)	7	37%
	3 189	12%) 34%	27	17%) 41%	0	--
	4 354	22%)	38	24%)	2	10%
TOTAL	1625	100%	158	100%	19	100%
Percentage Attrition of Total District N	20%		19%		15%	

greater attrition rate of 34 and 40 percent respectively among this subgroup of students. The overall attrition rate at each college, as determined by the ratio of terminating students compared to the total college population, is remarkably stable across all colleges of the district--corresponding to an approximate percentage distribution of 20 percent per one hundred students.

One of the issues more frequently voiced by two-year college educators during the last decade is that of discontinuous education or what in institutional jargon is known as part-time attendance. Previous studies (Lynch, 1959; Hilleary, 1963; Matson, 1965; Hughes, 1967) have shown part-time student attrition to be high--the explanation being that the part-time student is likely to be thoroughly attuned to the world of work and possibly may be enrolled more for social than for academic reasons. Table II indicates that student attrition is indeed higher among part-time as compared to full-time students. Approximately 23 percent of all part-time students enrolled during Fall Semester 1971 in the Metropolitan Junior College District terminated study whereas the percentage distribution of attrition for full-time students reached a figure of 16 percent. Differences in part-time attrition rates between colleges were insignificant but variant results were attained when comparative analysis was conducted of full-time student attrition rates in member colleges. Specifically, Longview Community College exhibits a lower attrition rate (29 percent) with respect to full-time students terminating one or two courses during the fall semester than is characteristic of Maple Woods (32 percent) and Penn Valley (33 percent) Community Colleges. Viewed in terms of total curriculum withdrawal (three courses or more), Maple Woods and Penn Valley evidence a relatively lower attrition rate (67 percent and 68 percent respectively) representative of full-time students terminating three or more courses when compared to Longview Community College with a

Table II. Curriculum Course Withdrawals and College Attrition Among Students Classified According to Enrollment Status: Fall Semester 1972

College	Full-Time		Part-Time	
	N	%	N	%
Longview	(Total College N = 1494)		(Total College N = 1195)	
Courses	1	45	168	58%
Terminated	2	27	77	26%
	3	29	42	16%
	4	143	5	0%
TOTAL		<u>244</u>	<u>292</u>	<u>100%</u>
Percentage Attrition of Total College N		16%		25%
Maple Woods	(Total College N = 866)		(Total College N = 865)	
Courses	1	29	127	64%
Terminated	2	20	51	26%
	3	26	19	10%
	4	80	1	0%
TOTAL		<u>155</u>	<u>198</u>	<u>100%</u>
Percentage Attrition of Total College N		18%		22%
Penn Valley	(Total College N = 1861)		(Total College N = 2836)	
Courses	1	55	372	59%
Terminated	2	37	183	29%
	3	34	66	11%
	4	157	9	0%
TOTAL		<u>283</u>	<u>630</u>	<u>100%</u>
Percentage Attrition of Total College N		15%		22%
District	(Total District N = 4221)		(Total District N = 4896)	
Courses	1	129	667	60%
Terminated	2	84	311	28%
	3	89	127	12%
	4	380	15	0%
TOTAL		<u>682</u>	<u>1120</u>	<u>100%</u>
Percentage Attrition of Total District N		16%		23%

full-time student attrition rate of 71 percent for students terminating an identical number of courses. It is significant to note, however, that the three percent differential between colleges is too minute to stimulate debate in terms of the comparative strength of various causative factors of full-time student attrition at each college. Clearly, of primary significance is the finding that part-time student status is a highly significant indicator of college student attrition.

Studies of the discontinuing student in the community college have been somewhat narrowly conceived in terms of their omission of several critical variables that may be determinant factors in attrition. One such variable is sex--a variable that has continually been treated as a multiple factor in attrition but rarely as a single factor. Previous research (Eells, 1956; Matson, 1965; and Elish, 1969) has supported the hypothesis that sex is a causative factor in attrition insofar as females are more apt to develop a sense of belonging and of identity with the college environment than are males--the rationale being that attrition among female students is lower than that of male students. Failure to relate personality with the institutional environment, in this view, gives rise to dissatisfaction and feelings of irrelevance in educational aims and endeavors among a large population of male college students. The findings in this study relative to the impact of sex on attrition (Table III) support this proposition. Among male students enrolled in member colleges of the Metropolitan Junior College District during the Fall Semester 1971, 22 percent did not return for the following semester as compared to a percentage distribution of 17 percent for female students. Examined in greater detail, the majority (79 percent) of female students terminated only one or two courses prior to institutional withdrawal whereas 59 percent of the male students in the population exhibited a similar tendency. Viewed from another perspective, almost one-half (41 percent) of male

Table III. Curriculum Course Withdrawals and College Attrition Among Students Classified According to Sex: Fall Semester 1972

College	Male		Female	
	N	%	N	%
Longview	(Total College N = 1759)		(Total College N = 924)	
1	124	30%)	89	57%)
2	77	18%)	27	17%)
3	57	14%)	14	9%)
4	122	38%)	26	17%)
TOTAL	<u>380</u>	<u>100%</u>	<u>156</u>	<u>100%</u>
Percentage Attrition of Total College N		24%	17%	
Maple Woods	(Total College N = 1059)		(Total College N = 655)	
1	83	34%)	73	65%)
2	52	22%)	19	17%)
3	36	15%)	9	8%)
4	69	29%)	12	10%)
TOTAL	<u>840</u>	<u>100%</u>	<u>113</u>	<u>100%</u>
Percentage Attrition of Total College N		23%	17%	
Penn Valley	(Total College N = 2447)		(Total College N = 2352)	
1	201	39%)	226	58%)
2	136	26%)	84	21%)
3	68	13%)	32	8%)
4	117	22%)	49	13%)
TOTAL	<u>522</u>	<u>100%</u>	<u>391</u>	<u>100%</u>
Percentage Attrition of Total College N		21%	17%	
District	(Total District N = 5265)		(Total District N = 3931)	
1	408	36%)	388	59%)
2	265	23%)	130	20%)
3	161	14%)	55	8%)
4	308	27%)	87	13%)
TOTAL	<u>1142</u>	<u>100%</u>	<u>660</u>	<u>100%</u>
Percentage Attrition of Total College N		22%	17%	

students discontinuing their education in the district during Fall Semester 1971 terminated three courses or more as compared to only 21 percent of women demonstrating the same withdrawal tendency.

When attention is turned to the analysis of sex-linked differentials in withdrawal tendency between member colleges of the district, the results are as follows:

1. The attrition pattern at Longview Community College is evenly divided among male students as 48 percent terminated one or two courses while 52 percent terminated three or more courses. Female students exhibit a skewed attrition pattern as approximately 3 out of 4 (74 percent) withdrew from only one or two courses before institutional termination whereas the remainder (26 percent) withdrew from three or more courses. The overall percentage attrition for the total student population (classified according to sex) at Longview Community College is 24 percent for male students and 17 percent for female students.
2. The attrition pattern at Maple Woods Community College is comprised of a moderately skewed distribution for male students as 56 percent terminated one or two courses prior to institutional withdrawal and 44 percent dropped three or more courses before discontinuing enrollment. Female students demonstrate a sharply skewed distribution as 82 percent terminated only one or two courses and 18 percent dropped three or more courses prior to complete institutional withdrawal. The overall percentage attrition for the total student population (in terms of sex classification) at Maple Woods Community College is 23 percent for male students and 17 percent for female students.
3. The attrition pattern in evidence at Penn Valley Community College corresponds to a severely skewed pattern for both male and female students. On the one hand, 65 percent of male students withdrew from one or two courses prior to termination of college enrollment whereas 35 percent dropped three or more courses before discontinuation of study. Similar to this pattern, 79 percent of female students terminated one or two courses before total institutional withdrawal and the remaining 21 percent discontinued three or more courses prior to leaving the college environment. The overall percentage attrition for the total population of male and female students at Penn Valley Community College approximates a figure of 21 percent for men and 17 percent for women.

These results indicate that sex is a major determinant of variation in attrition among students in member colleges of the Metropolitan Junior College District.

More detailed consideration will be given to the phenomenon of sex-linked differentials in college student attrition in the "Conclusions and Implications" section of the study.

To investigate whether enrollment status (full-time/part-time) caused variation in sex differentials relevant to student attrition, a two-way frequency distribution was tabulated for curriculum course withdrawals classified by sex and enrollment status. The results, shown in Table IV, indicate that enrollment status does affect the sex factor in student attrition. Clearly, for example, when part-time students are removed from the discontinuing student population, data relative to sex-linked differentials in college student attrition take on a different hue. The attrition pattern of the district full-time male student population corresponds to a skewed distribution (as contrasted to a balanced distribution in Table III wherein sex is considered independent of enrollment status) with 29 percent terminating one or two courses and 71 percent withdrawing from three or more courses prior to discontinuation of education. Full-time student attrition for women students assumes a more balanced distribution as 38 percent of women withdrew from one or two courses and 62 percent withdrew from three or more courses. Institutional differences are prevalent as a lower percentage (67 percent) of full-time male students at Penn Valley Community College withdraw from three or more curriculum courses (prior to discontinuation of study) than is characteristic of Maple Woods and Longview Community Colleges (72 and 75 percent respectively). Data relevant to the withdrawal status of full-time women students suggest a reversal of this trend: women students at Maple Woods Community College exhibit the lowest percentage distribution relative to withdrawal from three or more courses (52 and 56 percent respectively) whereas women enrolled in Penn Valley Community College show the highest percentage (70 percent) of student withdrawals from the curriculum program prior to institutional withdrawal. The major finding does

Table IV. Curriculum Course Withdrawals and College Attrition Among Students
Classified According to Enrollment Status and Sex: Fall Semester 1972

College		Full-Time				Part-Time			
		Male		Female		Male		Female	
		N	%	N	%	N	%	N	%
<u>Longview</u>	1	30	16%)	15	25%)	94	48%	74	77%
	2	16	9%)	11	18%)	61	31%	16	17%
	3	21	11%)	8	13%)	36	18%	6	6%
	4	<u>117</u>	<u>64%)</u>	<u>26</u>	<u>43%)</u>	<u>5</u>	<u>3%</u>	<u>0</u>	<u>0%</u>
TOTAL		<u>184</u>	<u>100%</u>	<u>60</u>	<u>100%</u>	<u>196</u>	<u>100%</u>	<u>96</u>	<u>100%</u>
<u>Maple Woods</u>	1	16	13%)	13	45%)	67	59%	60	71%
	2	19	15%)	1	3%)	33	29%	18	21%
	3	23	18%)	3	10%)	13	11%	6	7%
	4	<u>68</u>	<u>54%)</u>	<u>12</u>	<u>42%)</u>	<u>1</u>	<u>1%</u>	<u>0</u>	<u>0%</u>
TOTAL		<u>126</u>	<u>100%</u>	<u>29</u>	<u>100%</u>	<u>114</u>	<u>100%</u>	<u>84</u>	<u>100%</u>
<u>Penn Valley</u>	1	42	20%)	13	17%)	159	50%	213	68%
	2	27	13%)	10	13%)	109	35%	74	23%
	3	25	12%)	9	12%)	43	14%	23	7%
	4	<u>113</u>	<u>55%)</u>	<u>44</u>	<u>58%)</u>	<u>4</u>	<u>1%</u>	<u>5</u>	<u>2%</u>
TOTAL		<u>207</u>	<u>100%</u>	<u>76</u>	<u>100%</u>	<u>315</u>	<u>100%</u>	<u>315</u>	<u>100%</u>
<u>District</u>	1	88	17%)	41	25%)	320	51%	347	70%
	2	62	12%)	22	13%)	203	32%	108	22%
	3	69	13%)	20	12%)	92	15%	35	7%
	4	<u>298</u>	<u>58%)</u>	<u>82</u>	<u>50%)</u>	<u>10</u>	<u>2%</u>	<u>5</u>	<u>1%</u>
TOTAL		<u>517</u>	<u>100%</u>	<u>165</u>	<u>100%</u>	<u>625</u>	<u>100%</u>	<u>495</u>	<u>100%</u>

obtain, however, that although women exhibit a lower tendency than men to terminate their entire curriculum program prior to institutional withdrawal, enrollment status of students is an intervening factor which does have impact upon the specific number of courses terminated as well as the overall college withdrawal tendency. This finding is indicative of an extra-institutional factor involved in student attrition-- that of outside employment or work obligation which often has been viewed as an antecedent determinant of student attrition tendency in terms of its function as an external stimulus to periodic attendance and part-time enrollment status.

A last finding of major interest in the study concerns the relationship between the percentage distribution of overall student attrition (i.e., attrition via graduation, transfer, informal withdrawal, formal withdrawal) in the Metropolitan Junior College District and the percentage distribution of students executing formal curriculum course withdrawals prior to discontinuation of enrollment. The results in Table V reveal that approximately 3246 or 36 percent of the total student population enrolled in member colleges of the district during Fall Semester 1971, did not return for the following spring semester. The percentage breakdown of attrition between colleges was remarkably stable: Longview Community College, 33 percent; Maple Woods Community College, 38 percent; and Penn Valley Community College, 36 percent. It is significant to note, however, that only 1802 (56 percent) of the total number of 3246 discontinuing students executed formal course withdrawals during the semester prior to termination of study. These data might be interpreted as indicative of a manifest change or conflict in motivation to attend college on the part of a large number of students. Motivation is not a static concept: interests, needs, and goals shift and evolve rapidly among college students to the extent that a recurring phenomenon in higher education today is the "informal drop" or termination without withdrawal.

Table V. Percentage Attrition for Member Colleges of the Metropolitan Junior College District: Fall Semester 1972

College	Non-Returning Students Fall 1971 - Spring 1972	Percentage Attrition of Total College N	Non-Returning Students Receiving W Grades	Percentage Attrition of Total College N
<u>Longview</u> Total College N = 2689	900	33.4%	536	19.9%
<u>Maple Woods</u> Total College N = 1731	664	38.3%	353	20.3%
<u>Penn Valley</u> Total College N = 4674	1682	35.9%	913	19.5%
<u>District</u> Total District N = 9094	3246	35.6%	1802	19.8%

Clearly, the student population of member colleges of the Metropolitan Junior College District exhibits a marked tendency toward frequent execution (one out of every two withdrawal cases) of the "informal withdrawal." This tendency, its consequences for institutional goals and structure, and its implications for student development will be discussed in the section that follows.

Conclusions and Implications

In general, results of the study supported previous findings (Lynch, 1959; Summerskill, 1962; Hilleary, 1963; Matson, 1965; and Astin, 1972) that attrition patterns differ among students according to selected characteristics (i.e., residence, enrollment status, and sex). Unfortunately, however, despite considerable research on the non-continuing student, few investigations have been designed to systematically

examine course withdrawals for various student subgroups as a preliminary indicator of total institutional withdrawal. The attrition pattern for out-of-district and full-time male students enrolled in member colleges of the Metropolitan Junior College District was characterized by a prevailing tendency toward withdrawal from three or more courses prior to termination as compared to a lower tendency toward complete curriculum withdrawal among within-district and full-time female students. A converse phenomenon also obtained: full-time women students and within-district students exhibited a greater propensity to maintain partial credit loads and thus most often terminated only a portion of their curriculum program before discontinuation of study. Quite to the contrary, full-time male and out-of-district students were less likely to continue study on the basis of maintenance of a partial credit load and more often than not would terminate their entire curriculum program. When enrollment status and sex were considered concurrently relative to curriculum course withdrawal and institutional attrition, the results proved conclusively that complete curriculum withdrawal prior to discontinuation of study is greater among full-time men than full-time women.

Of the 3246 students who were enrolled for the Fall Semester 1971, but who did not return for the Spring Semester 1972, 1802 students (56 percent) executed formal course withdrawals. A cursory analysis of the number of formal course withdrawals as compared to the number of "informal drops" indicated that stable attrition ratios existed among Longview, Maple Woods, and Penn Valley Community Colleges as the formal withdrawal/informal drop ratio at each college approximated a figure of 1.8/1.0. Viewed in terms of previous studies, these results would appear to reveal a change or conflict in motivation to attend college. In this vein, a number of other investigations have presented a wide range of competing factors underlying student attrition

and the remainder of the study will be devoted to the exposition of these factors and their impact upon institutional structure and student development.

The attrition concept is clearly associated with the larger question of student characteristics in general. For instance, it has been rather common practice to describe the comprehensive community college as an extremely heterogeneous institution in terms of its diverse student population--a population characterized by variant measures of academic abilities, aspirations, and socioeconomic status. In this sense, the Metropolitan Junior College District with its enrollment of and equal investment in large numbers of "transfer," "occupational," and "remedial" students does, by implication, serve a mixed population.

Descriptions of student heterogeneity are meaningful in terms of their utility in examining motivational factors involved in college attrition. While all facets of the phenomenon of attrition cannot be studied in a single population or a single research investigation, it is important that greater emphasis be placed on the identification of methods for retention of students in member colleges of the Metropolitan Junior College District. In that the college environment is a unique sociocultural milieu for the development of individual behavior and attitudes, each student receives a new direction and perhaps a new perspective relative to social interaction because of his total experience in the environment. Therefore, if research related to attrition and retention of students is to have any effect on the organizational response of colleges to expressed and unexpressed student needs, it will have to concentrate on immediate individual and social concerns and effectively disregard the broader implications of institutional policy.

The majority of studies addressed to the problem of student attrition have indicated that investigation of motivational factors in attrition is important due to

the diversity of institutional characteristics and values that students may encounter during college tenure. For example, there are numerous instances in which academic difficulty is experienced by students as a result of an improper fit between certain of their academic aspirations and curriculum programs offered at the institution of enrollment. Therefore, it is inadequate to ask whether or not a student has sufficient and appropriate motivation for college. A more meaningful question for consideration is: Does the student have sufficient and appropriate motivation for a specified college with specified characteristics and objectives? Moreover, in conducting research in this area it is helpful to distinguish between motivation with respect to college and motivation with respect to graduation from that college. Among students entering member colleges of the Metropolitan Junior College District there are those who explicitly have little or no intention of completing associate or certificate degree requirements. Therefore, in terms of motivational studies of students who fail to graduate, it is advisable to exclude or treat separately those students who enter the college environment with intentions other than completion of formal degree requirements.

There are a number of factors in addition to motivation which may account for high rates of student attrition in the comprehensive public community college. Although attrition rates provide a crude index of the extent of motivational change that takes place in college students, educational decision-making personnel have learned that there are two dimensions to the attrition problem that are not immediately apparent in the behavior and attitudes of college students. First, the student is still highly responsive to psychological forces originating outside the immediate college environment. Second, albeit colleges are principally concerned with instruction and administrative matters, students are social beings who react to their

environment primarily in terms of previous background experience--the rationale being that experience is comprised of a composite set of values, interests, and opinions which influence the nature and directionality of social behavior and attitudes. In this way parents occupy key positions in the wider circle of influence upon the changing values and attitudes of the college student. Clearly, the values, interests, and opinions of community college students are influenced in important ways by feelings of dependency, ambition, security, and rebellion stemming from familial encouragement, sanction, or disapproval. Similarly, group and community relationships may become increasingly important to the college student in terms of their impact upon individual motivation toward attendance at a particular college. Nearly all studies concerned with reasons underlying college student attrition report a relatively large percentage of students discontinue study in order to obtain freedom for residence in a home community, a smaller community, a less isolated community, or a desirable social environment. In many cases circumstances outside the college environment force a student to change his goals and plans irrespective of a positive motivation for college study. Perhaps the most frequent interruptive occurrences relative to continuous enrollment during the past decade have been the military service requirement and the financial difficulty of financing higher education. Financial concerns have been identified as an important reason for discontinuous education patterns among college students attending public community colleges but a number of authors (Cross, 1968; Sims, 1968, and Astin, 1972) have expressed doubt as to whether or not this factor is overly significant in most instances. There are other unavoidable, and often unexpected environmental and experimental circumstances that cause college attrition. Among these are death or serious illness in the family, a parent terminating a job or being transferred, or complete lack of family interest

in higher education. Data from attrition studies clearly indicate, however, that discontinuation of study appears to be a result of multiple factors. It is in view of this phenomenon that the following recommendations are offered relative to the need for institutional activity to significantly ameliorate both quantitative and qualitative factors involved in student attrition at member colleges of the Metropolitan Junior College District:

1. Basic research must be undertaken that attempts to isolate personality dimensions relevant to the identification of potential college dropouts.
2. Characteristics that differentiate the student high attrition potential and the student with high persistence potential must be identified and articulated in order that academic procedures can be developed and evaluated that may serve to ameliorate attrition tendency.
3. There is a need for analysis of college environmental characteristics that may affect student attrition rates. Clearly, identification of the potential dropout may lead to more clearly defined goals and more efficient use of resources. Curriculum programs may be especially tailored to meet the specific needs of different kinds of students enrolled for varying periods of time and various purposes. Identification of problems associated with the dropout may also lead to evaluation of what is learned in college, by whom, and toward what end.
4. Emphasis must be placed upon the upgrading institutional counseling services both prior to and following institutional matriculation. Greater attention should be focused upon the application, not just availability, of counseling services immediately upon enrollment and these services should be coordinated campus-wide within a continuing program involving instructional staff as well as the professional guidance personnel. Coupled with this concept is the concept of a common core curriculum for each student during the first semester of study, thus allowing time for more effective screening of major course sequence methodologies.
5. Consideration must be given to instructor preparation and attitudes that are part of the learning process. Instructor attitudes are critical with respect to retaining students in the community college--a factor overlooked in the two-year college literature in terms of the underlying conviction that because of the capacity to influence students, faculty must be devoted to the philosophic spirit of the public community college and particularly to the process of student-centered instruction.

6. Greater emphasis must be placed upon financial assistance and job placement services for community college students in light of demonstrated student difficulties in obtaining sufficient funds and in view of their pre-occupation with the world of work. In addition, there is need to improve the quality and attractiveness of core curricular activities in order to enhance student satisfaction and identification with the instructional mission of the institution. Carefully planned programs to better inter-personal relationships of the individual with faculty and peers should be undertaken as a function of administrative efforts toward student retention in the comprehensive community college.
7. Activity must be undertaken to develop various curriculum programs and practices which highlight the phenomenon of heterogeneity among students. Conversely, if there are demonstrated student tendencies toward homogeneity of characteristics, curriculum programs and procedures should be tailored for homogeneous content.

It is suggested in terms of the recommendations articulated above, that the question of student attrition in the Metropolitan Junior College District requires continual in-depth investigation, as well as the implementation of relevant findings established as part of a comprehensive research methodology.

The attrition concept is clearly associated with the larger question of student characteristics in general. For instance, it has been rather common practice to describe the comprehensive community college as an extremely heterogeneous institution in terms of its diverse student population--a population characterized by variant measures of academic abilities, aspirations, and socioeconomic status. In this sense, the Metropolitan Junior College District with its enrollment and equal investment in large numbers of "transfer," "occupational," and "remedial" students does, by implication, serve a mixed population.

Descriptions of student heterogeneity are meaningful in terms of their utility in examining motivational factors involved in college attrition. A number of researchers who have studied attrition have concluded that lack of motivation with reference to college attendance accounts for a substantial number of institutional withdrawals. Therefore, it is important to examine all motives that are brought

to the learning situation and to ascertain whether, in fact, each motive is a stimulant or a deterrent to scholarly accomplishment. This is a difficult research task because students, beyond question, have multiple reasons for attending college and these are not necessarily conscious or articulate among college-age youth. The major implication of research on attrition, however, is the need for continuing reexamination of facts about attrition that serve as the bases for current policy on admissions, instruction, grading, and counseling. There must be vigorous basic research on the phenomenon of attending college and learning in order that colleges, always with limited resources, will recognize how to foster maximum intellectual development in the maximum number of students.