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By-Gold, Ben K.

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Scholarship and persistence statistics for low-aptitude students in the developmental studies program include: (1) a comparison of the fall 1967 developmental students' grades with the grades for those remaining in spring 1968 and taking regular college classes; (2) the spring 1968 grades in each subject for these same students, and a comparison of their total GPAs with the fall of 1967 GPAs for all students enrolled in the college; (3) a comparison of grades in each course for these same two groups, and a comparison of the percentages in each group receiving a C or better; (4) persistence figures for fall 1965 developmental studies students through spring 1967, including the number of students above and below a C average for each of four semesters; (5) the numbers and percentages of these students completing from one to six semesters, and the number and types of AA degrees granted them; (6) the types of English courses they took, and their grades; (7) a comparison of remedial English grades for fall 1965 and fall 1967 developmental students, fall 1962 probationary students, and fall 1967 regular students; (8) a record of transcript requests by fall 1965 developmental studies students; and (9) some comparative persistence statistics from previous research studies. (MC)

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**LOS ANGELES CITY COLLEGE**

**"THE DEVELOPMENTAL STUDIES PROGRAM:  
SOME SCHOLARSHIP AND PERSISTENCE STATISTICS"**

**Research Study #68-11**

**Ben K. Gold  
November, 1968  
Office of Research**

LC 680 507

## **"THE DEVELOPMENTAL STUDIES PROGRAM: SOME SCHOLARSHIP AND PERSISTENCE STATISTICS"**

### **PURPOSE OF THE STUDY**

The Los Angeles City College Developmental Studies program for "low-aptitude" entering students is now in its fifth year. The program has not been static, adding and subtracting various elements (courses, materials, techniques, etc.) each semester in efforts to synthesize a program which will attain maximum achievement of the objectives of the endeavor. For this and other reasons, evaluation of the program has been difficult. The purpose of this study is to obtain data which will aid in determining the degree of success of the program in meeting one specific objective: "to provide instructional and guidance experiences for these students which will prepare as many as possible to perform at a level adequate for probable success in the mainstream of college work"

### **PROCEDURE OF THE STUDY**

Because of the changing nature of the program, it was decided to make an analysis of the academic performance of recent students in the college 'mainstream' after being released from the Developmental Studies program. For this purpose, the Spring, 1968 records of the Fall, 1967 Developmental Studies students were examined in detail and comparisons made with other appropriate groups. In order to obtain persistence data, records of the Fall, 1965 Developmental Studies group were examined over a six semester period.

Transcripts of L.A.C.C. records for all Fall, 1967 and Fall, 1965 Developmental Studies students were obtained from the Office of Admissions. These records were analyzed as indicated in the next section. Comparative data for all L.A.C.C. students were obtained from the Office of Instruction, and for other subgroups of students from Research Studies #63-10, 64-15, 66-1, 67-2.

## FINDINGS

308 students were registered in the Fall, 1967 Developmental Studies program after the fifth week of the semester, and thus received final grades. Table 1 indicates grade point averages for the 295 students who completed some work during the Fall, 1967 semester (in which they were enrolled in the Developmental Studies program) and for the 227 students who completed work during the Spring, 1968 semester. Table 1a indicates an estimate (by inspection of courses taken) of majors for those students who obtained a C average in the Spring, 1968 semester.

Figure 1 illustrates graphically the distribution of grade point averages for these two groups, and also the Fall, 1967 GPA distribution for those students who completed the Spring, 1968 semester.

Table 2 shows the grades made in all subjects taken by the Fall, 1967 Developmental Studies students in the Spring, 1968 semester. Figure 2 illustrates the total grade distribution graphically and permits comparison with grades earned by all L.A.C.C. students in the Fall, 1967 semester.

Table 3 permits comparison of Developmental Studies performance in the various courses taken, as it presents grade point average earned and percent of students earning a C or above for each course in which seven or more students were enrolled. Also presented for comparison purposes is the GPA and percent C or above for all Fall, 1967 students who enrolled in the course indicated. Courses are listed in order of Developmental Studies students' GPA, highest first.

Table 4 indicates four semester persistence figures for the 201 students enrolled in the Fall, 1965 Developmental Studies program. The table indicates how many students (together with percent based on the original 201) completed each semester, together with a breakdown into those above and below a C average.

Table 5 follows the Fall, 1965 Developmental Studies students over six semesters, indicating the number and percent completing from one to six semesters. Also indicated is the number obtaining an AA degree, together with the majors for these graduates.

The records of the Fall, 1965 Developmental Studies students were searched to determine what courses in English were taken subsequent to their experience in the Developmental Studies program. Table 6 presents this information. Table 7 permits comparison of English 21 performances by Fall, 1965 Developmental students subsequent to their Developmental Studies semester, Fall, 1967 Developmental Studies students in the Spring, 1968 semester, and all L.A.C.C. students in the Fall, 1967 semester. Also presented are statistics for 291 students who entered L.A.C.C. in the Fall, 1962 semester and whose entrance examination score would have qualified them for the Developmental Studies program. These students took English 21 in their first semester at L.A.C.C.

When a student requests a transcript of his record, a notation is made on his permanent record card. To give some indication as to future intentions of the Fall, 1965 Developmental Studies students Table 8 was prepared, showing the distribution of transcript requests.

Table 9 collects available persistence statistics from previous research studies and presents them for comparative purposes.

**TABLE i - Academic Performance of Fall, 1967 Developmental Studies  
Students in the Fall, 1967 and Spring, 1968 Semesters**

FALL, 1967 GRADE POINT AVERAGE										No Work Comp.	TOTAL
	0.00-0.49	0.50-0.99	1.00-1.49	1.50-1.99	2.00-2.49	2.50-2.99	3.00-3.49	3.50-4.00			
3.50-4.00				1	1	1					3
3.00-3.49				2	2	5	4				14
2.50-2.99			1			6	8		1		40
2.00-2.49		1	1	6	17						44
1.50-1.99			6	7	21	7	3				61
1.00-1.49		1	10	13	25	7	3	1		1	38
0.50-0.99	1	3	7	8	14	3	2				29
0.00-0.49	2	1	10	3	11	1	1				
No work completed		2	3	1	1			1			8
Did not register Spring '68	22	6	9	7	12	1	3			1	71
TOTAL	25	14	47	48	104	31	24	2	13		308

Correlation coefficient: 0.35

Grade point average Fall, 1967: 1.92 (N=295)

Grade point average Spring, 1968: 1.42 (N=227)

Grade point average Fall, 1967 for those who completed  
Spring, 1968: 2.10 (N=227)

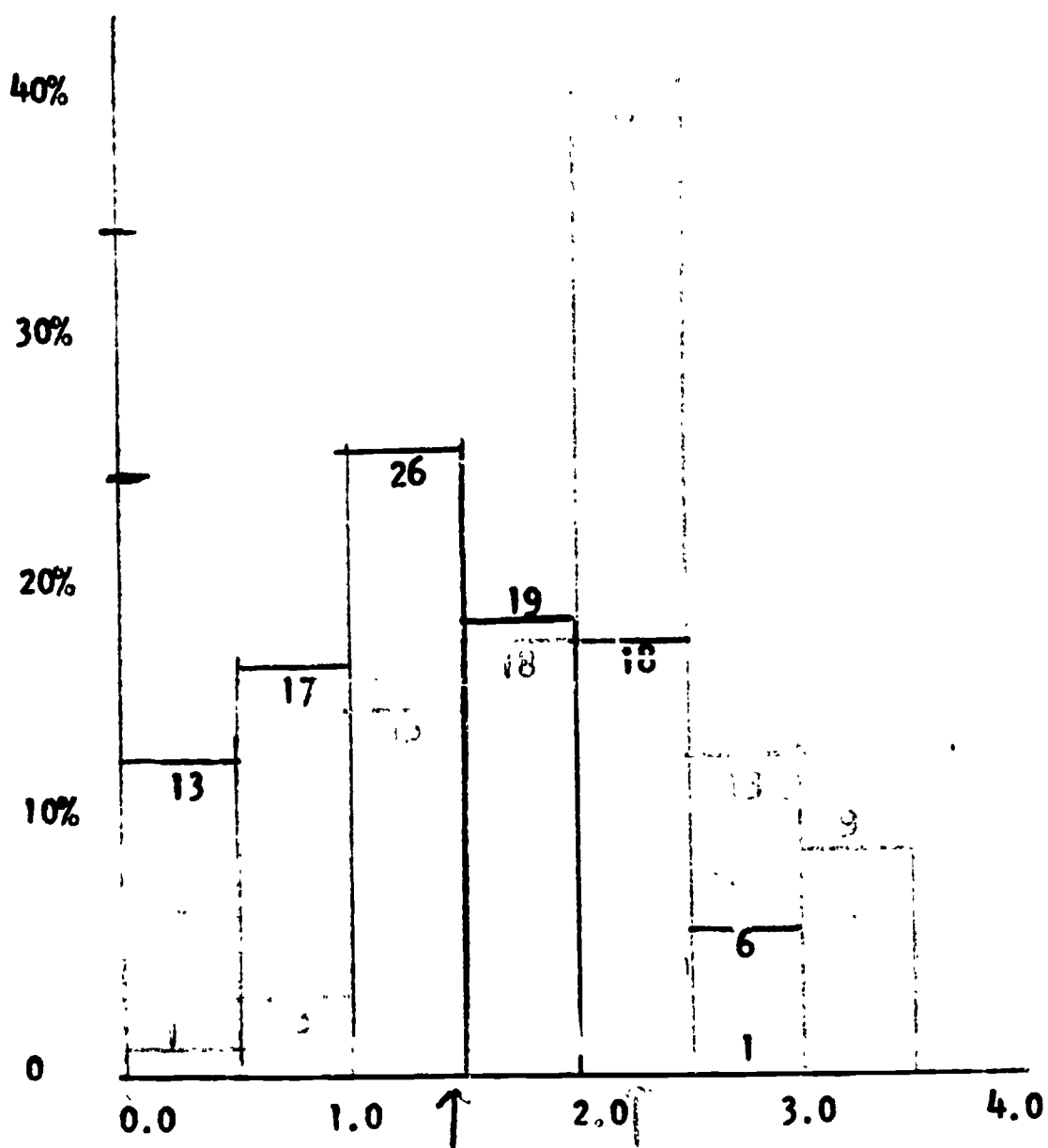
% completing Spring, 1968: 227/308 = 74%

% above C average Fall, 1967: 161/295 = 55%

% above C average Spring, 1968: 56/227 = 25%

**Figure 1 - Distribution of Grade Point Averages of Fall, 1967  
Developmental Studies In Fall, 1967 and Spring, 1968**

Spring, 1968 in purple (N=227)



Mean GPA = 1.42    25% C average or above

**TABLE 1 a - Estimated Majors of Successful (above C average)  
"Graduates" of Fall, 1967 Developmental Studies Program**

<u>MAJOR</u>	<u>Number</u>
Home Economics	9
Secretarial Science	8
Art	7
Business Administration	5
Transportation	4
Police Science	3
Theater Arts	3
Music	2
Dental Technology	2
Radiologic Technology	1
Broadcasting	1
General or Academic	11
	<hr/>
Total	56

of 308 original, 188 (61%) were female

of 56 successful, 37 (65%) were female



TABLE 2 - Grades Earned by Fall, 1967 Developmental Studies Students in the Spring, 1968 Semester

SUBJECT	A	B	C	D	F	WF	INC.	W	TOTAL NO.
ACCOUNTING									
1				1	2	1		2	6
21	1	1	6	5	6			2	21
31			3	5	1			1	10
37		2							2
ANATOMY									
1			1	1	2			1	5
ANTHROPOLOGY									
1				1	1				2
2			2	2				1	5
ARCHITECTURE									
5			3	1	2		1		7
10		2	1	1		2			6
20				2	1	1			4
ART									
1		1		1					2
3		1	1	2					5
11		4	3	1				1	9
20		5	4	1		2			12
30			3				1		4
40		1	3				1		5
BIOLOGY									
23				3	2				5
30			1						1
32				1					1
BROADCASTING									
1			1		1			1	3
2			1	1				2	4
3			1		1			1	3
4			1		2			1	4
9			1	1				1	3
BUSINESS									
1		1	5	2	2			1	11
10				4					4
38				8	11	2		1	22
BUS. DATA PROCESSING									
1		1	5	6				2	14
CHEMISTRY									
3						1			1
11						1			1
CHINESE									
1	2								2
COMPUTER TECHNOLOGY									
2						1			1

TABLE 2 - (continued)

SUBJECT	A	B	C	D	F	WF	INC.	W	TOTAL
DENTAL ASSISTING									
1			2	2		1			5
2			1	1	2	1		1	6
3			1	3					4
4				3					3
DENTAL TECHNOLOGY									
1			3	1					4
3		1	2		1				4
4	1	1	1	1					4
6		2		2					4
10	1	1	1		1				4
17			2	2					4
ECONOMICS									
1				1					1
EDUCATION									
3	1	9	1						11
ELECTRONICS									
4			1		2			1	5
5			2	1	1			1	5
8			1		1				2
9			1		1				2
10				1	3				4
GENERAL ENGINEERING									
1	1								1
3									1
32				1	3				4
ENGINEERING, TECHNICAL									
1				1					1
4			1						1
5				1					1
6					1				1
ENGLISH									
1		1	3	3	1	1			9
2		1							1
21		14	55	16	5			17	107
44				1					1
FRENCH									
1		1							1
GEOGRAPHY									
1			1					1	2
2				1					1
GEOLOGY									
1			1						1
GRAPHIC ARTS									
2	1								1
9		1							1

TABLE 2. - (continued)

SUBJECT	A	B	C	D	F	WF	INC.	W	TOTAL NO.
HEALTH									
10		2	10	15	7		2	2	38
11				3	1				4
12		1							1
HEBREW									
2				1					1
HISTORY									
11					1				1
7							1		1
11			5	10	3	1	1	2	22
12			4	6	1			4	15
31			1						1
HOME ECONOMICS									
1		9	8						17
10		3	3						6
13		3	4						7
17			1						1
20		1	1						2
24								1	1
31			2	2					4
32		1	3						4
60			6	3	1				10
INDUSTRIAL ARTS									
1				1					1
JAPANESE									
2							1		1
JOURNALISM									
1			1	1					2
5								1	1
16								1	1
18									1
19								1	1
LAW									
1			6						6
MATHEMATICS									
20						1			1
30		2	4	6	9			2	23
31			2	5	8	3		3	21
32					1	1		1	1
37									2
MERCHANDISING									
1				1	2				3
11					1				1
21				2	1				3
40				1					1
41				1					1

TABLE 2 - (continued)

SUBJECT	A	B	C	D	F	WF	INC.	W	TOTAL NO.
<b>MUSIC</b>									
2				3					3
6				1		1			2
79			1	2					3
32				1	6			1	8
40		1	1						2
55	2								2
57	1								1
60		1	1	1					3
62								1	1
68			1						1
82								1	1
89	3	1							4
<b>NURSING</b>									
13		1							1
44			1						1
<b>OFFICE MACHINES</b>									
2		2	1	2	1			1	7
<b>PHILOSOPHY</b>									
2			1	1				1	3
<b>PHYSICAL EDUCATION</b>									
16				1					1
21				1					1
23					1				1
35							1	1	2
40								1	1
41		1							1
48			1						1
<b>POLICE SCIENCE</b>									
4								1	1
5		1							1
6		3						1	4
7	1	1	1						3
56								1	1
<b>POLITICAL SCIENCE</b>									
1			2	3	1				6
2			1						1
<b>PSYCHOLOGY</b>									
1		5	22	12	8			9	56
2			1						1
20			5					1	6
<b>RADIOLOGIC TECHNOLOGY</b>									
1		1							1
2		1	1					1	3

TABLE 2 - (continued)

SUBJECT	A	B	C	D	F	WF	INC.	W	TOTAL NO
<b>SECRETARIAL SCIENCE</b>									
1		2	5	6	1	1		2	17
2		2	8	10	1	1		1	23
10		2	2	4	3	2		1	14
11			2						2
31			5	7	5			2	19
32			1						1
33			1	1					2
<b>SOCIOLOGY</b>									
1			2	11	3			4	20
<b>SPANISH</b>									
1		1	1					1	3
3			1						1
<b>SPEECH</b>									
1		3	8	5	1	1		2	20
3			2	1					3
21			1				1		2
31			2					1	3
40		3	1					1	5
<b>THEATER ARTS</b>									
2			2	2		1			5
4	6								6
6				1					1
10			1	1			1		3
23					2		1		3
40	1								1
44		1	1					1	3
<b>TRANSPORTATION</b>									
1		3						1	4
3			3						3
7			1						1
<b>ZOOLOGY</b>									
5					1			2	3
<b>TOTAL</b>	<b>22</b>	<b>109</b>	<b>270</b>	<b>228</b>	<b>126</b>	<b>30</b>	<b>12</b>	<b>98</b>	<b>895</b>
<b>%</b>	<b>2</b>	<b>12</b>	<b>31</b>	<b>26</b>	<b>14</b>	<b>3</b>	<b>1</b>	<b>11</b>	<b>100%</b>
<b>(% - W's not included)</b>	<b>3</b>	<b>14</b>	<b>34</b>	<b>28</b>	<b>16</b>	<b>4</b>	<b>1</b>	<b>--</b>	<b>100%</b>

## GRADES FOR ALL L.A.C.C. STUDENTS, FALL 1967.

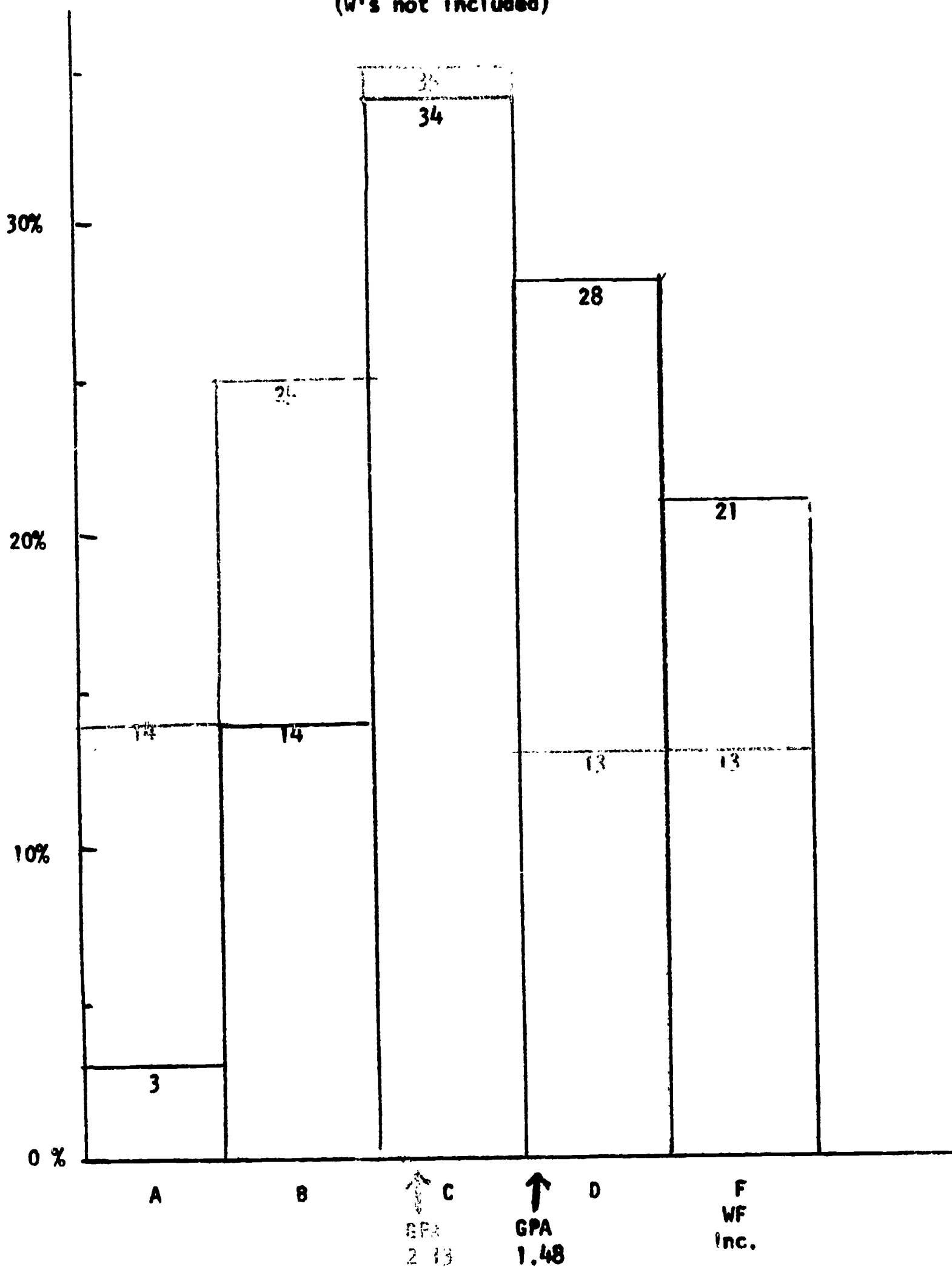
<b>TOTAL</b>	<b>5452</b>	<b>9539</b>	<b>13680</b>	<b>4851</b>	<b>3227</b>	<b>1118</b>	<b>858</b>	<b>4775</b>	<b>43510</b>
<b>%</b>	<b>12</b>	<b>22</b>	<b>32</b>	<b>11</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>11</b>	<b>100%</b>
<b>(W's not included)</b>	<b>14</b>	<b>25</b>	<b>35</b>	<b>13</b>	<b>8</b>	<b>3</b>	<b>2</b>	<b>--</b>	<b>100%</b>

**Figure 2 - Grade Distributions:**

Fall, 1967 Developmental Studies Students in the  
Spring, 1968 semester (797 grades)

All CMC students in Fall, 1967 (38,735 grades)

(W's not included)



**TABLE 3 - Spring, 1968 Performance of Fall, 1967 Developmental Studies Students, According to Success in Courses\***

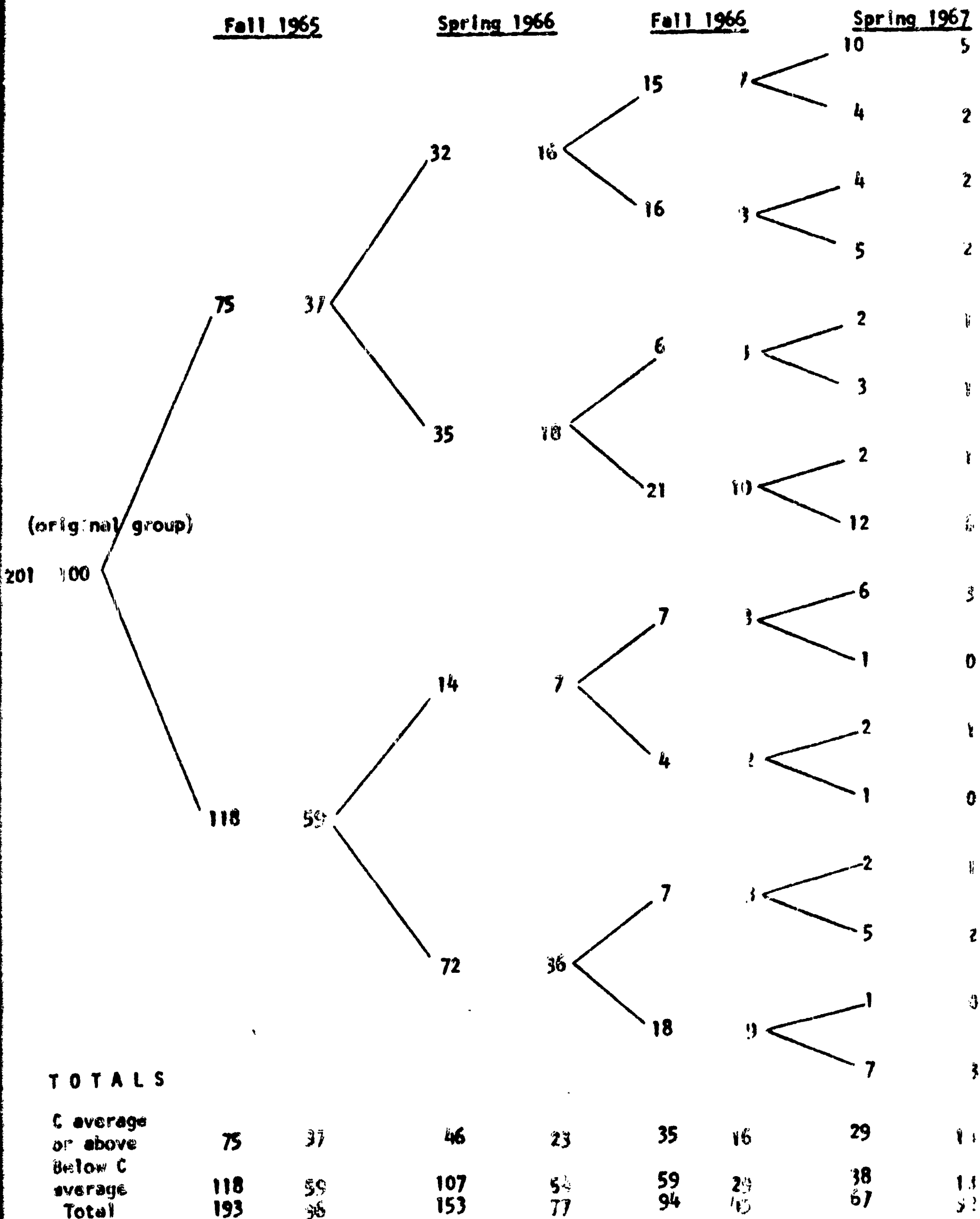
Course	Spring '68 Performance of Fall '67 Dev. Studies Studs.			Fall '67 Performance of ALL L.A.C.C. Studs.			(A)-(C)	(B)-(D)
	No. Enrl'd.	G.P.A.	% C** or Above	No. Enrl'd	G.P.A.	% C** or Above		
Education 3	11	3.00	100	33	3.87	100	-.87	0
Home Ec. 1	17	2.53	100	61	2.28	79	+.25	-.21
Home Ec. 13	7	2.43	100	45	3.07	95	-.64	-.5
Art 11	9	2.38	88	173	2.35	83	+.03	+.5
Art 20	12	2.00	75	193	1.94	69	+.06	+.6
English 21	107	1.87	77	1243	1.87	71	.00	+.6
Speech 1	20	1.67	61	583	2.05	78	-.38	-.17
Off. Mchs. 2	7	1.67	50	130	2.70	81	-.1.03	-.31
Bus. O.P. 1	14	1.58	50	187	2.47	84	-.89	-.34
Psychology 1	56	1.51	57	1545	2.01	74	-.50	-.17
Business 1	11	1.50	50	240	2.38	80	-.88	-.20
Home Ec. 60	10	1.50	60	158	2.36	84	-.86	-.24
Secretarial Science 1	17	1.47	47	259	1.90	63	-.43	-.16
Secretarial Science 2	23	1.45	47	215	1.95	68	-.50	-.21
English 1	9	1.33	34	1356	2.07	76	-.74	-.32
Acctg. 21	21	1.26	42	88	1.99	69	-.73	-.27
Acctg. 31	10	1.22	33	202	2.17	80	-.95	-.47
History 12	15	1.17	36	802	1.84	61	-.67	-.25
Health 10	38	1.14	33	1219	1.88	66	-.74	-.33
Secretarial Science 10	14	1.08	31	119	1.96	58	-.88	-.27
Secretarial Science 31	19	1.00	29	241	1.92	67	-.92	-.38
History 11	22	1.00	25	768	1.73	62	-.73	-.37
Arch. 5	7	1.00	43	61	1.81	62	-.81	-.19
Math. 30	23	0.95	29	300	2.20	72	-1.25	-.43
Sociology 1	20	0.94	12	696	1.85	68	-.89	-.56
Math. 31	21	0.50	11	450	1.53	51	-1.03	-.40
Business 38	22	0.38	0	187	1.23	41	-.85	-.41
Music 32	8	0.14	0	490	1.81	64	-1.67	-.64
<b>ALL COURSES</b>	<b>895</b>	<b>1.48</b>	<b>50</b>	<b>43510</b>	<b>2.13</b>	<b>74</b>	<b>-.65</b>	<b>-.24</b>

\* Courses with 7 or more enrollees

\*\* W's not included

**TABLE 4 - Four Semester Persistence at L.A.C.C. of Developmental Studies  
Students Fall, 1965**

Top figure indicates number completing the semester indicated  
with C average or above, bottom figure those below C average.  
Percents of original number indicated in red.





**TABLE 5 - Distribution of Number of Semesters Attendance at L.A.C.C. by Fall, 1965 Developmental Studies Students (N=201)**

<u>No. of semesters attended 1965-68 (not necessarily consecutive)</u>	<u>Number</u>	<u>% of Total</u>
one or more	193	96 %
two or more	164	82 %
three or more	96	48 %
four or more	75	37 %
five or more	41	20 %
six or more	21	10 %

No. of students earning AA degree: 10 (5%)

College Transfer .....	6
Dental Assistant .....	2
Legal Secretary .....	1
Medical Assistant Typist .....	1

**TABLE 6 - Courses (and grades) in English Subsequently Completed at LACC by Fall, 1965 Developmental Studies Students**

**English 21:**

A .....	0
B .....	13
C .....	36
D .....	17
F .....	6
WF .....	3
W .....	11
	<hr/> 86

GPA = 1.71

**English 1:**

A .....	0
B .....	2
C .....	13
D .....	3
F .....	1
WF .....	1
W .....	3
	<hr/> 23

GPA = 1.75

**English 2:**

A .....	0
B .....	2
C .....	1
D .....	1
WF .....	1
	<hr/> 5

GPA = 1.60

**English 3:**

A .....	0
B .....	1
C .....	2
D .....	1
	<hr/> 4

GPA

**English 44:**

C .....	1
---------	---

**English 18:**

D .....	1
---------	---

**English 8:**

D .....	1
---------	---

**TABLE 7 - Comparative Performances in English 21**

	No.	A	B	C	D	F	WF	Inc.	W	GPA	% C or Above
Spring '68 Performance of F'67 Developmental Studies Students	107	0	14	55	16	5	0	0	17	1.87	71%
All Subsequent Performance F'65 Developmental Studies Students	86	0	13	36	17	6	3	0	11	1.71	65%
All Students Fall, 1967	1243	21	284	462	173	87	37	21	158	1.87	71%
Entering Probationary Students Fall, 1962	291	0	29	101	84	41	12	5	19	1.37	27%

**TABLE 8 - Transcripts Requested by Fall, 1965 Developmental Studies Students**

<u>Transcripts sent to:</u>	<u>No.</u>
Self .....	14
California Junior college .....	36
California State College .....	35
University of California .....	2
Other colleges .....	33
Armed Forces .....	5
High Schools & Special Schools .....	3
USC Athletic Department .....	4
Miscellaneous .....	5

**TABLE 9 - Some Comparative Persistence Statistics****GROUP:**

- A - Fall, 1967 Developmental Studies
- B - Fall, 1965 Developmental Studies
- C - Fall, 1962 random sample of all entrants
- D - Fall, 1962 random sample of entrants scoring below SCAT entrance examination probation cutoff
- E - Fall, 1958, random sample of all entrants
- F - Fall, 1958 random sample of entrants scoring below SCAT entrance examination probation cutoff

GROUP	Original		Number Completing								No Receiving	
	No.	%	1 sem.		2 sem.		3 sem.		4 sem.		AA	Degree
	No.	%	No.	%	No.	%	No.	%	No.	%		
A	308	100	295	96	227	74	NA		NA		NA	
B	201	100	193	96	153	77	94	45	67	32	10	5
C	501	100	430	86	307	62	NA		NA		NA	
D	83	100	67	81	44	53	NA		NA		NA	
E	430	100	376	87	277	64	177	41	111	26	52	12
F	92	100	80	88	49	54	20	22	12	13	2	2

NA - Information not available

## CONCLUSIONS

The purpose of this study was to obtain data which would give some indication as to how students who have completed one semester in the Developmental Studies program perform in the "mainstream" of college life. The following conclusions appear to have some validity, based on the findings presented in the last section:

- (1) Developmental Studies students' grade point average in their first semester following the Developmental Studies program drops about one half of a grade point from their Developmental Studies GPA (Table 1).
- (2) Correlation between GPA in the two semesters is about 0.35, too low to indicate much predictive ability. A past study (#64-1) indicates correlation of about 0.60 for all students.
- (3) The majority of Developmental Studies "graduates" who made a C average or better in their second semester were majoring in a two year curriculum, with Home Economics and Secretarial Science heading the list (Table 1-a).
- (4) Developmental Studies GPA in their second semester is also about one half of a grade point below that of all L.A.C.C. students in courses taken by Developmental Studies "graduates." However, wide variations in GPA differences between these two groups occur in the various courses taken (Table 2, 3).
- (5) Courses in which Developmental Studies "graduates" appear to have great difficulty are Music 32, Business 38, Mathematics 31, Sociology 1, and Mathematics 30. Performance in each of these courses by Fall, 1967 Developmental Studies students averaged below a D (Table 3).
- (6) Developmental Studies students who took Home Economics and Art courses performed well in these courses, averaging above a C average (Table 3).
- (7) The Fall, 1967 Developmental Studies program apparently prepared the students to succeed in English 21, at least as well as the average English 21 student (Table 3). Performance in English 21 of these Fall, 1967 "graduates" was slightly better than the overall L.A.C.C. performance, and considerably better than a group of 1962 students who would have been placed in the Developmental Studies program had there been one. It should be noted, however, that Developmental Studies "graduates" were not able to obtain proportionately as many B grades (about 15%) as all college students (about 30%).

- (8) Persistence at L.A.C.C. of Developmental Studies students is clearly greater than that of comparable students who were not in the program, and compares favorably with available "all college" persistence statistics (Tables 4,5,9).
- (9) Over ten percent of the Fall, 1965 Developmental Studies students subsequently took English I (Table 6), with about three fourths of them earning a C or better.

## RECOMMENDATIONS

Instructional efforts of the Developmental Studies program have been primarily aimed at improving communication skills. Some evidence in this study indicates that this objective is being partially realized. Overall performance of Developmental Studies "graduates" in the college "mainstream" is low, however, with about three fourths earning below a C average. Courses requiring quantitative skills account in large part for this. It is recommended that:

- (1) consideration be given to making improvement of quantitative skills a major emphasis of the Developmental Studies program.
- (2) counselors of Developmental Studies students become familiar with the information of Tables 2, 3 and 1-a, indicating which courses and majors offer Developmental Studies "graduates" reasonable probabilities of success.

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