     THIS STUDY OF 487 GRADUATES (JUNE 1966 TO AUGUST 1967)
FOCUSES ON THE DEGREE OF ASSOCIATION BETWEEN THE GRADUATES'
PERFORMANCE IN HIGH SCHOOL (MEASURED BY GPA AND SAT SCORES)
AND THEIR ACADEMIC SUCCESS AT BOROUGH OF MANHATTAN COMMUNITY
COLLEGE (MEASURED BY CUMULATIVE INDEX AT GRADUATION). MAJOR
FINDINGS INCLUDE (1) WEAK ASSOCIATION BETWEEN HIGH SCHOOL
AVERAGES OR SCHOLASTIC APTITUDE TEST SCORES AND BMCC
ACHIEVEMENT, (2) A WIDE SPREAD OF SCHOLASTIC ACHIEVEMENT
AMONG ALL GRADUATES, (3) SIGNIFICANT DIFFERENCES AMONG
VARIOUS CLASSES AND BETWEEN MALES AND FEMALES, (4) SOME
CONFORMITY TO EXPECTED SCHOLASTIC PATTERNS AMONG VARIOUS
GRADUATING CLASSES, (5) FOR THE WOMEN, A CLOSER CONFORMITY TO
EXPECTED PATTERNS, (6) THE HIGHEST DEGREE OF ASSOCIATION FOR
LIBERAL ARTS AND SECRETARIAL STUDENTS (ALL WOMEN), (7) A
LESSER DEGREE OF ASSOCIATION FOR BUSINESS STUDENTS, (8) ABOUT
THREE OUT OF TEN GRADUATES WITH A HIGH SCHOOL AVERAGE OF LESS
THAN 75 PERCENT, (9) A MAXIMUM HIGH SCHOOL GPA OF 87 PERCENT
FOR MEN AND OF 95 PERCENT FOR WOMEN, AND (10) AN AVERAGE
INDEX OF THE GRADUATES OF 2.54, WITH CONCENTRATION IN THE
LOWER GROUPINGS. (HH)

ERIC

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CORRELATIONS BETWEEN HIGH SCHOOL AVERAGES AND SAT SCORES AND FINAL SCHOLASTIC INDEXES: BMCC GRADUATES, JUNE 1966 THROUGH AUGUST 1967

Between June 1966 and August 1967, BMCC graduated 487 students. They are distributed, as follows, by graduating class and by sex.

Total BMCC Graduates, By Date of Graduation and Sex
June 1966 through August 1967

Date of Graduation	Total	Male	Female	Percent of Total Male	Female
June 1966	163	99	64	60.7	39.3
August 1966	16	10	6	62.5	37.5
January 1967	14	6	8	42.9	57.1
June 1967	244	110	134	45.1	54.9
August 1967	50	29	21	58.0	42.0
Total	487	254	233	52.2	47.8

There are a number of interesting trends revealed in this table. There is, for example, a significant reversal in the relative percentages of boys and girls in the second major graduating class of June 1967 compared to our first major graduating class in June 1966. In June 1966, boys comprised 3/5 ths (60.7%) and girls 2/5 ths (39.3%) of the graduates: in June 1967, these percentages were almost reversed: girls comprised 54.9% and boys 45.1% of the graduates. This opens areas for investigation, such as correlation with entry data, curriculum factors and other aspects.

Our attention in this study, however, is focused on the degree of association between the graduates' performance in high school or other schools before admittance to BMCC as measured by high school averages and SAT scores (verbal, mathematical and combined) and the academic success achieved at BMCC as measured by the cumulative index at graduation.

Some of the major findings of the study include:

1. The association between high school averages and BMCC is relatively weak; the coefficient of weak correlation amounts to 0.492. The association between SAT scores and achievement

is much weaker, with the coefficient of rank correlation measuring 0.271 for overall, 0.151 for verbal and 0.220 for mathematical SAT scores.

2. Scholastic achievement, as measured by BMCC indexes, is widespread among all graduates within the entire range of high school averages and SAT scores. Clusters of higher indexes seem to be as great among the graduates who entered with high school averages of less than 75 as those with higher averages.

3. There are marked and significant differences among the various graduating classes and curricula as well as between male and female students.

4. A definite trend towards conformity to expected scholastic patterns exists among the various graduating classes. The coefficient of rank correlation for high school averages and BMCC indexes rose from 0.572 for the June 1966 graduating class to 0.750 for the June 1967 graduating class.

5. On average, girls conform more closely to expected patterns of achievement (the correlation ratio for high school averages and BMCC indexes is 0.548 for all females) than boys (the comparable correlation ratio is 0.431 for all boys.

6. Liberal Arts and Secretarial Science students (all girls) show the highest degree of association (a correlation ratio of 0.659 for both) between high school averages and BMCC indexes. The Liberal Arts ratio was strongly influenced by the performance of the girls, who attained a ratio of 0.823.

7. Business students exhibit a lesser degree of association between expectancy and performance (for example, correlation ratios between high school average and BMCC indexes run between 0.261 for Banking and 0.642 for Small Business Operation). This may indicate the presence of additional influences on scholastic behavior.

8. Close to 3 out of every 10 students we graduated (28.5%) entered with high school averages of less than 75%. The differences between the girls and boys, however, are highly significant. Over 2/5 ths of these boys (42.3%) were admitted with averages below 75% against 1/7 th (14.2%) for the girls.

9. The maximum high school average for boys was 87% against 95% for girls. 9 out of 10 boys (90.5%) had averages of less than 80% while 2 out of every 5 girls (38.4%) had averages of 79% and over and 1 out of 4 (27.0%) had 80% or over.

10. The average index achieved by the average graduate was 2.54. Concentration, however, was in the lower groupings. The mode, the index of highest frequency, was 2.24 while the median, which split the scores in half, was 2.47. Two-fifths (40.6%) had indexes of 2.28 or less; 6 out of 7 (85.8%) had 2.99 or less and only 1.2% made B+ or better contrasted with the 10.4% who completed their studies with indexes up to 2.10. One fourth of our graduates (24.4%) had indexes of 2.24 or less.

*   *   *

Only comparable data were used in reviewing the information available.
High school averages and BMCC indexes for the same students were
available for 431 students but only 203 graduates had SAT scores in their
files. Following are the samples used in this study compared to the
total number of graduates.

	Total	Male	Female
Total Number of Graduates	487	254	233
Graduates with both high school averages and BMCC indexes	431	220	211
Graduates with both SAT scores and BMCC indexes	203	109	94

*   *   *

1. Graduate Student Indexes

The average graduate attained an average final cumulative index of 2.54.
(See Table 1) This measure, however, tends to be somewhat misleading
since there is pronounced bunching of indexes towards the lower values
(See Chart 1 *). The mode 2.24 is substantially below the arithmetic
average. One-third of all the graduates (33.4%) had indexes which fell
between the mode and the average. One half of all graduates (49.9%) had
less than a C+ average (2.46). Less than 5% graduated with indexes that
would qualify them for the Dean's list. One fourth (24.4%) of our
graduates had indexes below 2.24 and 6 out of 7 students (85.8%) had less
than a B average.

The following table abstracts pertinent statistics from the accompanying
cumulative percentage table.

Characteristics of Graduate Indexes	BMCC Index at Cumulative Percentage Point	Comment
Bottom 10%	2.10	
Bottom 20%	2.22	
Bottom 25%	2.24	mode
Bottom 40%	2.38	
Mid-point	2.47	median
53% of all graduates	2.49	less than C+ average
75% of all graduates	2.78	
14% of all graduates	3.00	B average or better
4% of all graduates	3.30	Dean's list
1% of all graduates	3.50	B+ average or better

* This chart reveals a definite skewed distribution to the left with long
flat tail to the right.

Table 1.   PART 1

Final BMCC Indices Achieved by BMCC Graduates June 1966 Through August 1967, By Number in Each Index Grouping

	1	2	3	4	5	6	7
	BMCC Index	Number of Graduates	Cumulative Percent of Graduates		BMCC Index	Number of Graduates	Cumulative Percent of Graduates
1	199	1	0.4		241	6	44.1
2	200	1	0.5		242	5	45.2
3	201	7	2.1		243	2	45.7
4	202	6	3.5		244	4	46.6
5	203	6	4.9		245	9	48.7
6	204	5	6.0		246	5	49.9
7	205	3	6.7	median →	247	4	50.8
8	206	4	7.7		248	1	51.0
9	207	2	8.1		249	7	52.7
10	208	3	8.8		250	5	53.8
11	209	3	9.5		251	5	55.0
12	210	4	10.4		252	6	55.4
13	211	5	11.6		253	2	56.8
14	212	3	12.3	average →	254	4	57.8
15	213	3	13.0		255	2	58.2
16	214	2	13.5		256	2	58.7
17	215	3	14.2		257	5	59.9
18	216	3	14.8		258	2	60.3
19	217	4	15.8		259	1	60.6
20	218	2	16.2		260	3	61.3
21	219	4	17.2		261	4	62.2
22	220	6	18.6		262	5	63.3
23	221	3	19.3		263	5	64.5
24	222	4	20.2		264	5	65.7
25	223	7	21.8		267	3	66.4
26	224	11	24.4	← mode	268	2	66.8
27	225	9	26.5		269	3	67.5
28	226	5	27.6		270	3	68.2
29	227	7	29.2		271	6	69.6
30	228	5	30.4		272	6	71.0
31	229	3	31.1		273	2	71.5
32	230	7	32.7		274	6	72.9
33	231	4	33.6		275	2	73.3
34	232	4	34.6		276	2	73.8
35	233	6	36.0		277	4	74.7
36	234	6	37.4		278	3	75.4
37	235	6	38.7		279	2	75.9
38	236	1	39.0		280	5	77.0
39	238	7	40.6		281	2	77.5
40	239	4	41.5		282	3	78.2
41	240	5	42.7		283	1	78.4

8 BMCC Index	9 Number of graduates	10 Cumulative Percent of Graduates	11	12 BMCC Index	13 Number of Graduates	14 Cumulative Percent of Graduates	
284	1	78.7		337	1	97.2	1
285	4	79.6		339	1	97.4	2
286	1	79.8		340		97.7	3
287	3	80.5		343	1	97.9	4
288	1	80.7		347	1	98.1	5
289	1	81.0		349	1	98.4	6
290	2	81.4		354	2	98.8	7
291	1	81.7		357	1	99.1	8
292	4	82.6		361	1	99.3	9
293	3	83.3		362	1	99.5	10
294	3	84.0		363	1	99.8	11
295	2	84.4		394	1	100.0	12
296	1	84.7					13
297	1	84.9					14
298	2	85.4					15
299	2	85.8					16
300	1	86.1					17
301	2	86.5			Measures of Central Tendency		18
302	1	86.8					19
303	3	87.2		Arithmetic Mean		2.54	20
304	1	87.5					21
305	3	88.2		Mode		2.24	22
306	4	89.1					23
307	1	89.3		Median		2.47	24
310	2	89.8					25
311	2	90.3					26
312	1	90.5					27
315	3	91.2					28
316	2	91.6					29
317	3	92.3					30
318	5	93.5					31
319	3	94.2					32
320	2	94.7					33
321	2	95.1					34
324	1	95.4					35
329	1	95.6					36
330	1	95.8					37
332	1	96.1					38
334	1	96.3					39
335	2	96.8					40
336	1	97.0					

Chart 1.

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FREQUENCY OF FINAL SCHOLASTIC INDEXES
FOR BMCC GRADUATES: JUNE 1966 THROUGH
AUGUST 1967
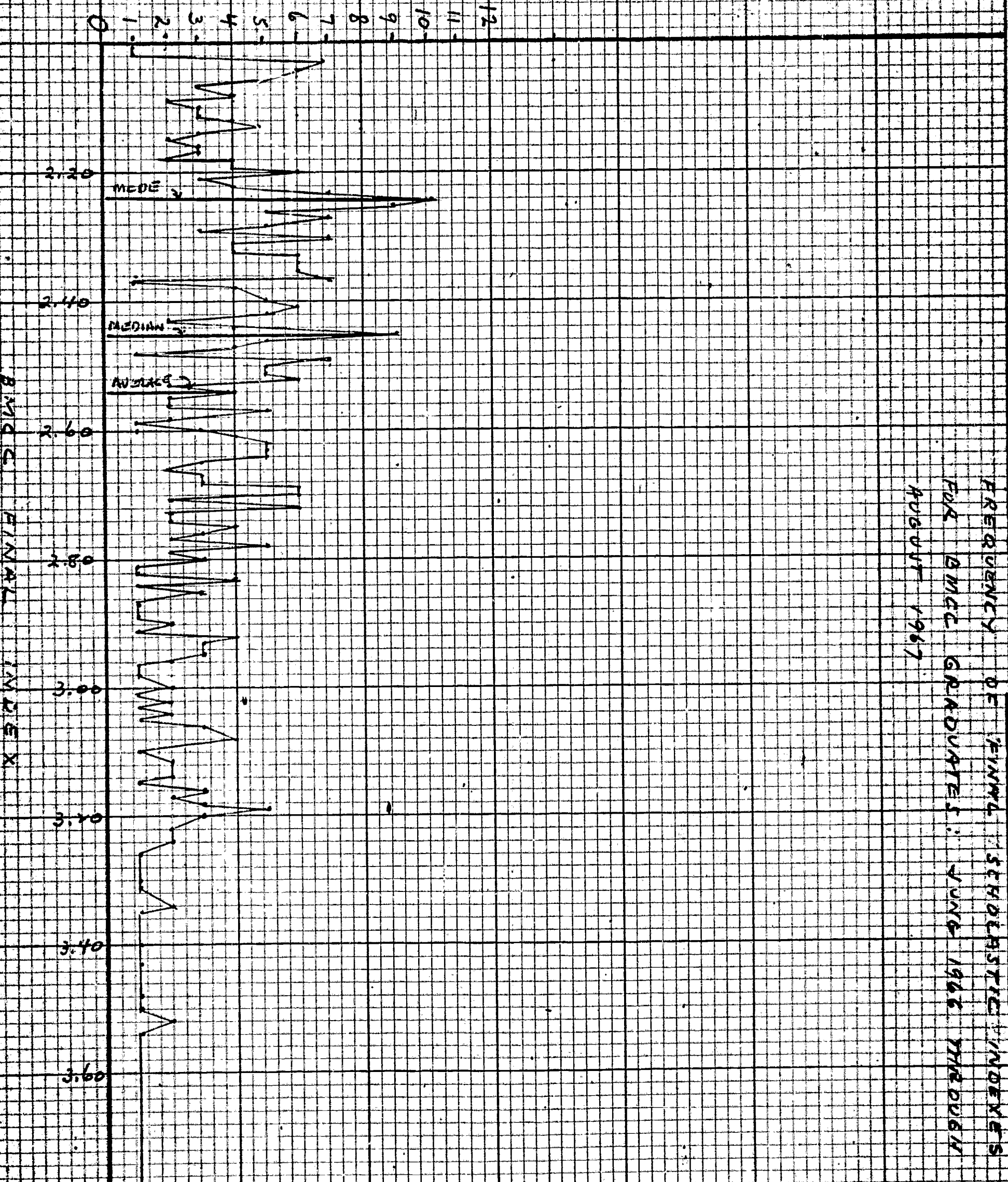
2. High School Averages vs Final BMCC Indexes

1. The distribution of indexes achieved by our graduates arrayed
   by their original high school averages are enumerated in Table 2
   and their scatter illustrated in Chart 2. What is immediately
   striking is the widespread character of this distribution.
   There seems to be equal possibility for graduates with lower high
   school averages to achieve high scholastic BMCC indexes as
   for those with higher high school averages to wind up with
   lower indexes. As analyzed later in this study, the overall
   degree of association is less than 0.5. For the present, we
   concentrate on the raw scores.

   Review of the data within each high school average seems to
   indicate a major qualitative change after an 80% or 81%
   high average. Up until that point, the range of scores within
   each point group of high school averages does not show significant
   variation as the following summary of the range of scores, by
   high school average, reveals. Some variation is also indicated
   between the group below 70% and the group between 70% and 81%.

High School Average	Range of Indexes	Size of Range
64	2.34	--
65	2.47	--
67	2.01 - 2.42	0.41
68	2.02 - 2.33	0.31
69	2.22 - 2.63	0.41
70	2.01 - 3.20	1.19
71	2.01 - 3.21	1.20
72	2.01 - 2.86	0.85
73	2.04 - 3.05	1.01
74	1.99 - 3.19	1.20
75	2.03 - 3.21	1.18
76	2.04 - 3.29	1.25
77	2.02 - 3.61	1.59
78	2.01 - 3.36	1.34
79	2.03 - 3.15	1.12
80	2.01 - 3.32	1.31
81	2.02 - 3.63	1.61
82	2.33 - 3.57	1.24
83	2.25 - 3.94	1.69
84	2.52 - 3.62	1.10
85	2.61 - 3.18	0.57
86	2.67 - 3.49	0.82
87	2.74 - 3.54	0.80
88	2.74 - 3.54	0.80
89	2.21 - 2.46	0.25
91	2.99	--
92	3.18	--
95	3.35	--

It is interesting that the highest index was attained by a
graduate with an 83% average; also graduates with 89% high
school average had a level of achievement as low as those
with 64% through 69%. Some with averages as low as 70% or

Table 2.

Individual Graduate Student Salaries – Arrayed in Ascending Order, By High School Average

BMCC Graduates: June 1966 through August 1967

1	2	3		4	5		6		7				
64	65	67	68	69	70	71	72	73	74	75	76	77	78
234	247	201*	202	222	201	201	201	204	199	203	204*	202*	201
		211	204	227	205	202	205	208	200*	209*	205*/208*	203*	201
		240	219*	245	212	203*	207	211	202	210*	213*/215	203	207/209
		242	233	246	225	225	214*	213	202*	212	215	204*	210
				263*	229	226	218	216	212	215*	216/217*	204	219
					235/232	231	218	220	213	216	222	206	220
					238	241	219	223	214	219/220	223/223	208	222
					241	244	221*	224	217	221	225	217*	224
					245	255	223	224	217	222*	226/226	223*	224
					252*/260*	260	223	225	219*	224*	227/226	224	230
					254	277	223	228	220	226	227	228	232
					320	284	225	230/231	220	227*	228/230	235*	233
						285	225	233	224	227	231*	238*	244
						295	229	233/234	224	234	231/234	240	247
						303	232*	240*	225	238*	235	242*	247
						312	248	241	227	238	235/241	245	249*
						321	252	245	228*	243*	244*	245	249
							260	252*	228	246	245*	245	249
							286	271*	230	249*	246*/249	249	251
								271*		250	250*	252*	253
								277	233*	251	254/255	254	256
								305	235*	252*	261	256	258*
									243	259*	262/262	257	262*
									244	269*	263	270*	263
Liberal Arts Students									257	269*	264	270	263
									264*	270*	271/274*	271*	264
									267	277	275*	273	267*
									269	280	276	278	268
									274	280	280/283	298	272
									274*	281	285*	298	272
									281	305	291*/293	310*	276
									287	310/319	293	311*	278
									292	321	294*	315*	279
									299		296	317*	279
									317		306/307	318*	285
									319		316	320	287
											319*	329	304
											325*	361*	311
											329		317

Totals

| 1 | 1 | 4 | 4 | 5 | 14 | 17 | 13 | 24 | 35 | 36 | 55 | 40 | |

	8		9		10		11		12		13		14		
	79	80	81	82	83	84	85	86	87	88	89	91	92	95	
	203	201	202*	253	225*	252*	261*	267*	274	274	221	299	318	335	1
	206*	203	211	238*	229*	290	263*	349	280	287	234	^	^	^	2
	211*	206	224*	239	236*	303	316	^	290	354	246				3
	2?3	209	224	250*	242	306	318		330						4
	224*	225	230*	272*	249	324	^		354						5
	227*	235	230	288*	257*	334*									6
	230*	238	239	295	264*	343*									7
	232	239	245*	306*	277*	347									8
	234	241	250	315*	282*	362									9
	239	242	257	340	282*	^									10
	240*	242*	271*	257*	282										11
	240	245*	275		292										12
	241*	246	285*		318*										13
	250*	247	292*		318										14
	251	251	302		337										15
	253*	251	306*		394*										16
	258*	254	363*		^										17
	261	260													18
	261	262													19
	262	264*													20
	268*	271													21
	272*	272													22
	272	274*													23
	273*	278													24
	285*	293													25
	289	294													26
	292*	297													27
	294*	301													28
	300*	332													29
	301*	^													30
	305*														
	315*														
	33	29	37	11	16	9	4	2	5	3	13	1	1	1	

Line of regression:
$$y = -2.52 + 0.361 X$$

Coefficient of correlation

$$r = 0.492$$

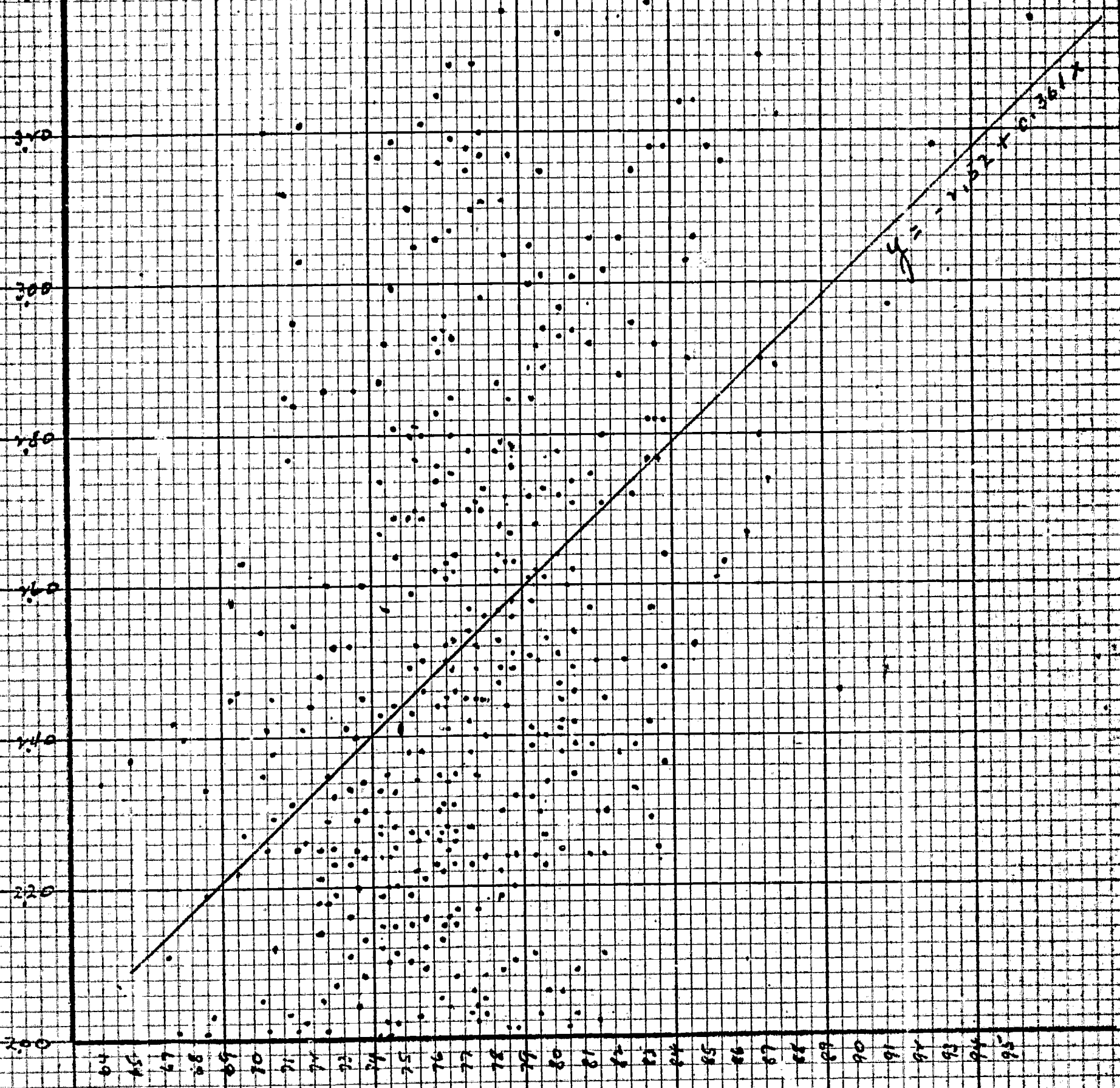SCATTER DIAGRAM

HIGH SCHOOL AVERAGES
VS BMCC INDEXES -
TOTAL GRADUATES
JUNE 1966 THROUGH
AUGUST 1967

$y = -2.52 + 0.361 X$

BMCC INDEX

HIGH SCHOOL AVERAGE

71% achieved the same success as those who entered with 91% and 92% averages.

The spread within each high school average group between the highest and the lowest index achieved shows almost a perfect bell curve with some tendency towards kurtosis (See Chart 3). Maximum variation and minimum degree of confidence in predictability of success is found in the 83% group. The 74% - 81% group also has wide divergences. Narrower divergences exist in the 69% to 74% suggesting, perhaps, greater confidence in predictability.

2. A companion question concerns   the distribution of the graduates among the various high school averages. The following percentage table showing the cumulative proportion of graduates in each high school average sheds light on this question.

Cumulative Percent of Number of Graduates by High School Average and Sex

High School Average	Total	Male	Female
64	0.2	0.5	-
65	0.5	0.9	-
67	1.4	2.3	0.5
68	2.3	3.6	0.9
69	3.5	5.9	0.9
70	6.7	10.0	3.3
71	10.7	16.8	4.3
72	14.8	22.7	6.6
73	20.4	30.9	9.5
74	28.5	42.3	14.2
75	36.9	53.6	19.4
76	49.7	63.2	35.5
77	58.9	75.5	41.7
78	68.7	83.6	53.1
79	76.3	90.5	61.6
80	83.1	92.7	73.0
81	87.0	95.5	78.2
82	89.6	95.9	82.9
83	93.3	97.7	88.6
84	95.4	98.6	91.9
85	96.3	98.6	93.8
86	96.8	99.1	94.3
87	97.9	100.0	95.7
88	98.6		97.2
89	99.3		98.6
91	99.5		99.1
92	99.8		99.5
95	100.0		100.0

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SIZE OF RANGE (SPREAD
BETWEEN HIGHEST AND
LOWEST INDEX) WITHIN
EACH HIGH SCHOOL
AVERAGE GROUP

RANGE OF INDEX

HIGH SCHOOL AVERAGE
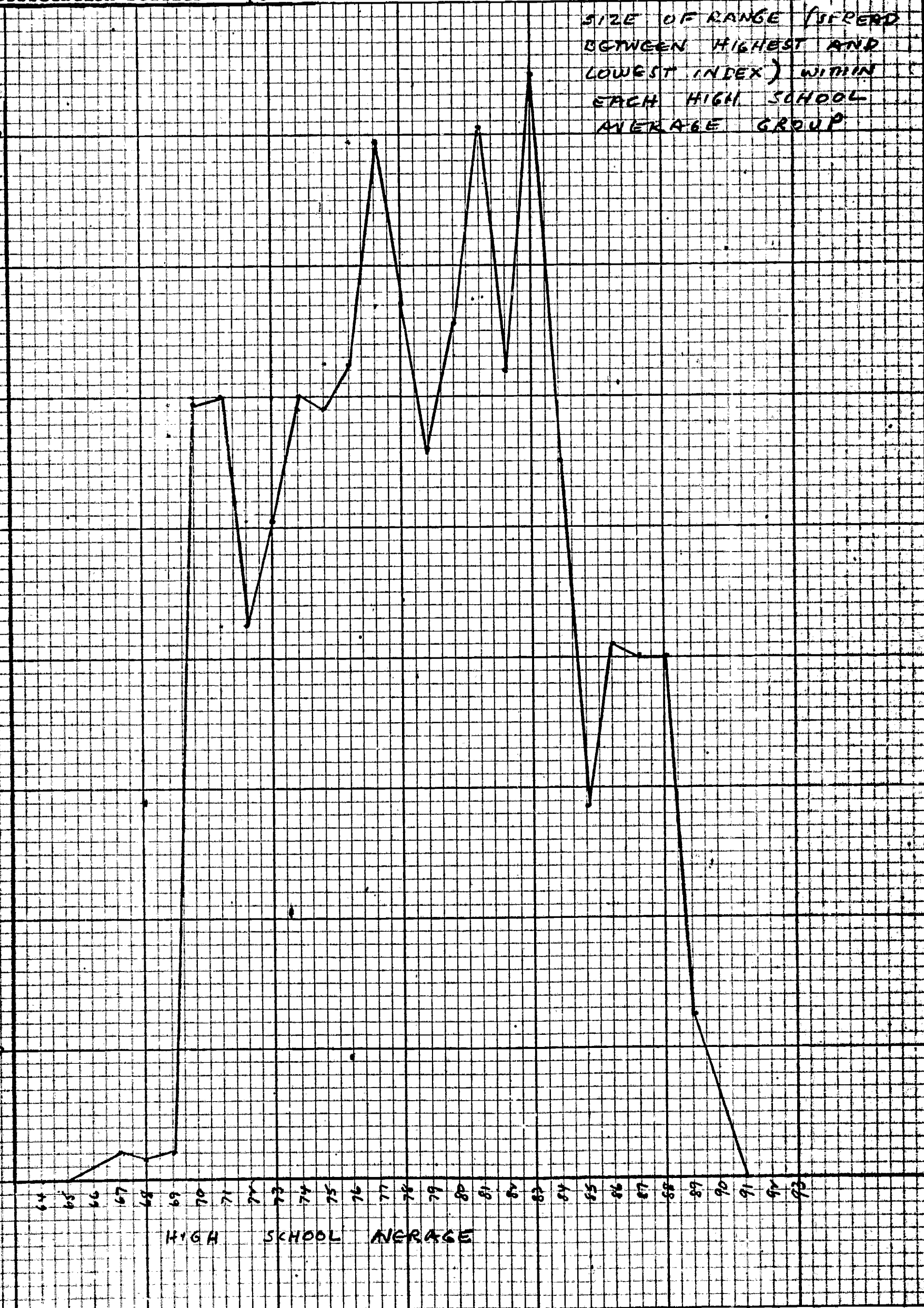
28.5% of our graduates had averages below 75%. The differences
between the girls and the boys are highly significant. Over
two-fifths of the boys (42.3%) were admitted with high school
averages below 75% against 14.2%, or one in seven, for the
girls.

Over 90% of the boys were admitted with averages of less than
80%. Two-fifths of the girls had averages in excess of 79%.
Overall, somewhat more than three-fourths of graduates (76.3%)
came in with under 80% high school averages.

The maximum high school average for boys was 87% against 95%
for girls. One out of every 15 girls who graduated (6.2%)
entered with high school averages of 85% or over.

3. Converting the array of indexes into averages for each high
    school average yields an average high school average for all
    graduates of 2.54, ranging from 2.15 for the 68% group to 3.35
    for the 95% average (See Table 3). The average for the boys
    was .09 points below the girls; 2.51 for male vs 2.60 for female.
    The modal groups for the boys are 2.46 and 2.47 while the mode
    for the girls was 2.57.

    This distribution is graphically portrayed on charts 4 and 5.
    Chart 4 shows indexes achieved by all graduates by high school
    average; chart 5 superimposes the male and female indexes on the
    total graduate histogram.

    Although wide dispersion is shown (for example, the four minimum
    average indexes are found among the 67%, 68%, 72% and 89% high
    school groups), there appear to be three qualitative levels of
    achievement. One major division is up to the 70% average
    (although the 65% group exceeds all other groups up to 75%);
    the second division is roughly between 71% and 81% (these two
    terminal indexes are identical.) These are followed by a
    transitional small number of classes leading to the third major
    division beginning with the 83% average.

    Analysis of achievement, by graduating class, shows interesting
    variation. The highest average index by any graduating class
    was 2.74, achieved by the January 1967 graduates; the lowest
    average index belongs to the August 1966 graduates, 2.39. The
    two major graduating classes to date, June 1966 and June 1967
    wound up with similar success; in 1966, the average index was
    2.55 and in 1967, 2.57.

    These data are summarized from Table 3 as follows:

Graduating Class	Average BMCC Index		
	Total	Male	Female
August 1967	2.49	2.42	2.59
June 1967	2.57	2.52	2.60
January 1967	2.74	2.60	2.95
August 1966	2.39	2.35	2.46
June 1966	2.55	2.53	2.58

	Initials	Date
Prepared By		
Approved By		

PART 1.

Table 3.

...ges BMCC Indices, By High School Average, By Graduating Class
BMCC Graduates: June 1966 through August 1967

| | GRAND | TOTAL | | BY GRADUATING C | | | | | |
| | | | | AUGUST 1967 | | | JUNE 1967 | | |
Average	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEM
4.0-.9	(1) 2.34	(1) 2.34	— —	— —	—	—	(1) 234	(1) 234	(-)
5.0-.9	(1) 2.47	(1) 2.47	— —	— —	—	—	(1) 247	(1) 247	(-)
7.0-.9	(4) 2.24	(3) 2.18	(1) 2.40	(4) 2.23	(3) 218	(1) 240	—	—	—
8.0-.9	(4) 2.15	(3) 2.13	(1) 2.19	(1) 2.19	—	(1) 219	(1) 204	(1) 204	(-)
9.0-.9	(5) 2.41	(5) 2.41	— —	— —	—	—	(3) 245	(3) 245	(-)
10.0-.9	(14) 2.39	(9) 2.34	(5) 2.48	(2) 2.18	(2) 218	—	(3) 212	(1) 201	(2) 2.
11.0-.9	(17) 2.57	(15) 2.64	(2) 2.22	(2) 2.14	(1) 226	(1) 202	(7) 261	(6) 265	(1) 2.
12.0-.9	(18) 2.27	(13) 2.24	(5) 2.34	(2) 2.24	(2) 224	—	(7) 238	(4) 239	(3) 2.
13.0-.9	(24) 2.35	(18) 2.40	(6) 2.24	(1) 2.13	(1) 213	—	(16) 233	(12) 237	(4) 2.
14.0-.9	(35) 2.45	(25) 2.46	(10) 2.40	(4) 2.47	(3) 238	(1) 274	(14) 245	(11) 247	(3) 2.
15.0-.9	(36) 2.48	(25) 2.47	(11) 2.51	(5) 2.60	(5) 260	—	(17) 246	(8) 239	(9) 2.
16.0-.9	(55) 2.53	(21) 2.48	(34) 2.57	(8) 2.64	(3) 253	(5) 271	(25) 252	(6) 233	(19) 2.
17.0-.9	(40) 2.60	(27) 2.62	(13) 2.54	(2) 2.57	(2) 257	—	(25) 268	(16) 277	(9) 2.
18.0-.9	(42) 2.53	(18) 2.62	(24) 2.46	(1) 2.56	(1) 256	—	(24) 250	(8) 255	(16) 2.
19.0-.9	(33) 2.55	(15) 2.62	(18) 2.49	(3) 2.59	—	(3) 259	(19) 257	(11) 265	(8) 2.
20.0-.9	(29) 2.56	(5) 2.51	(24) 2.57	(1) 2.51	(1) 251	—	(23) 258	(3) 239	(20) 2.
21.0-.9	(17) 2.59	(6) 2.52	(11) 263	— —	—	—	(12) 252	(5) 248	(7) 2.
22.0-.9	(11) 2.78	(1) 2.95	(10) 2.77	(1) 2.50	—	(1) 250	(3) 312	—	(3) 2.
23.0-.9	(16) 2.85	(4) 2.68	(12) 2.90	(2) 2.51	(1) 277	(1) 225	(5) 274	(1) 236	(4) 2.
24.0-.9	(9) 3.18	(2) 2.98	(7) 3.24	(1) 3.62	—	(1) 362	(4) 330	(1) 343	(3) 2.
25.0-.9	(4) 2.90	— —	(4) 2.90	— —	—	—	(3) 298	—	(3) 2.
26.0-.9	(2) 3.07	(1) 3.46	(1) 2.67	(1) 2.67	—	(1) 267	—	—	—
27.0-.9	(5) 3.23	(2) 3.10	(3) 3.32	— —	—	—	(2) 315	—	(2) 3.
28.0-.9	(3) 3.05	— —	(3) 3.05	— —	—	—	(2) 321	—	(2) 3.
29.0-.9	(3) 2.34	— —	(3) 2.34	(1) 2.34	—	(1) 234	(1) 246	—	(1) 2.
30.0-.9	— —	—	—	—	—	—	—	—	—
31.0-.9	(1) 2.99	— —	(1) 2.99	— —	—	—	(1) 299	—	(1) 2.
32.0-.9	(1) 3.18	— —	(1) 3.18	— —	—	—	(1) 318	—	(1) 3.
35.0-.9	(1) 3.35	— —	(1) 3.35	— —	—	—	(1) 335	—	(1) 3.
Average	(431) 2.54	(220) 2.51	(211) 2.60	(42) 2.49	(25) 242	(17) 259	(271) 257	(99) 252	(172)

Part 2

( ) = No. Students in Category

	6	7	8	9	10	11	12	
JANUARY 1967			AUGUST 1966			JUNE 1966		
TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
—	—	—	—	—	—	—	—	—	1
—	—	—	—	—	—	—	—	—	2
—	—	—	—	—	—	—	—	—	3
—	—	—	—	—	—	(2) 2.17	(2) 2.17	(—) —	4
—	—	—	—	—	—	(2) 2.33	(2) 2.33	(—) —	5
—	—	—	(1) 2.54	(1) 2.54	—	(6) 2.55	(4) 2.39	(2) 2.84	6
—	—	—	—	—	—	(8) 2.68	(8) 2.68	(—) —	7
2	(1) 2.52	(1) 2.32	(2) 2.06	(2) 2.06	—	(6) 2.73	(4) 2.70	(2) 2.31	8
—	—	—	—	—	—	(7) 2.43	(5) 2.48	(2) 2.34	9
—	—	—	(1) 2.00	—	(1) 2.00	(14) 2.42	(9) 2.42	(5) 2.44	10
6	(1) 2.26	—	—	—	—	(14) 2.46	(12) 2.47	(2) 2.40	11
74	(2) 2.74	—	—	—	—	(27) 2.51	(17) 2.54	(10) 2.47	12
1	—	(1) 3.61	(1) 2.03	(1) 2.03	—	(11) 2.37	(8) 2.42	(3) 2.24	13
—	—	—	(2) 2.53	(1) 2.63	(1) 2.24	(12) 2.54	(7) 2.74	(5) 2.26	14
—	—	—	—	—	—	(11) 2.51	(4) 2.53	(7) 2.49	15
78	(4) 2.45	(2) 2.74	(1) 2.03	—	(1) 2.03	(3) 2.48	—	(3) 2.48	16
—	—	—	—	—	—	(5) 2.74	(1) 2.71	(4) 2.76	17
88	(1) 2.88	—	—	—	—	(7) 2.68	(1) 2.95	(6) 2.64	18
—	—	—	(2) 3.00	(1) 2.82	(1) 3.58	(7) 2.92	(1) 2.82	(6) 2.94	19
—	—	—	—	—	—	(4) 2.94	(1) 2.52	(3) 3.09	20
—	—	—	—	—	—	(1) 2.63	(—) —	(1) 2.63	21
—	—	—	—	—	—	(1) 3.46	(1) 3.46	(—) —	22
—	—	—	—	—	—	(3) 3.29	(2) 3.10	(1) 3.67	23
—	—	—	—	—	—	(1) 2.74	—	(1) 2.74	24
—	—	—	—	—	—	(1) 2.21	—	(1) 2.21	25
—	—	—	—	—	—	—	—	—	26
—	—	—	—	—	—	—	—	—	27
—	—	—	—	—	—	—	—	—	28
—	—	—	—	—	—	—	—	—	29
									30
74	(6) 2.60	(4) 2.95	(10) 2.39	(6) 2.35	(4) 2.46	(148) 2.55	(84) 2.53	(64) 2.58	31

GRAPH : AVERAGE FINAL BMCC INDEXES
ACHIEVED BY TOTAL GRADUATES
JUNE 1966 THROUGH AUGUST

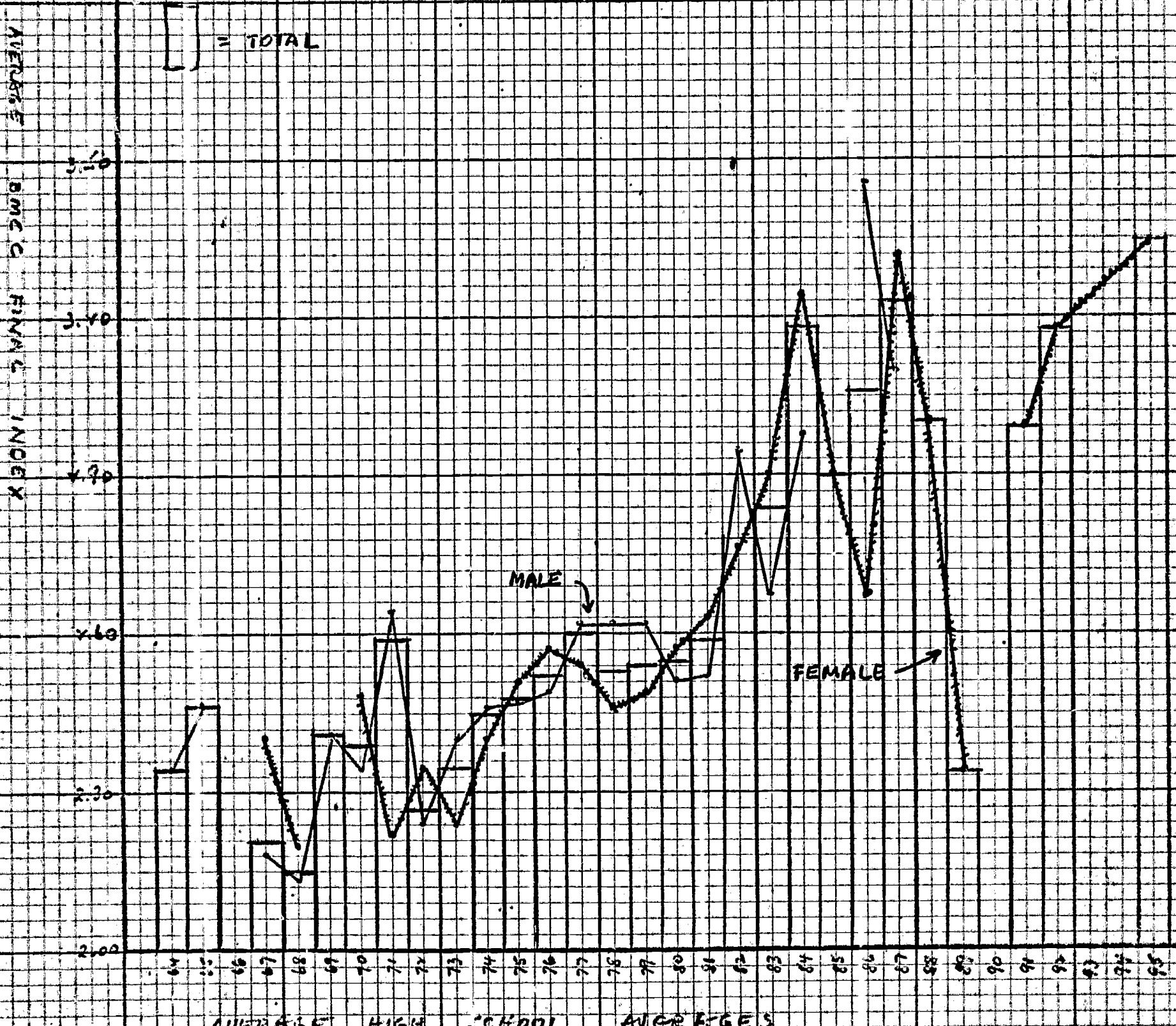AVERAGE HIGH SCHOOL AVERAGES

Chart 5
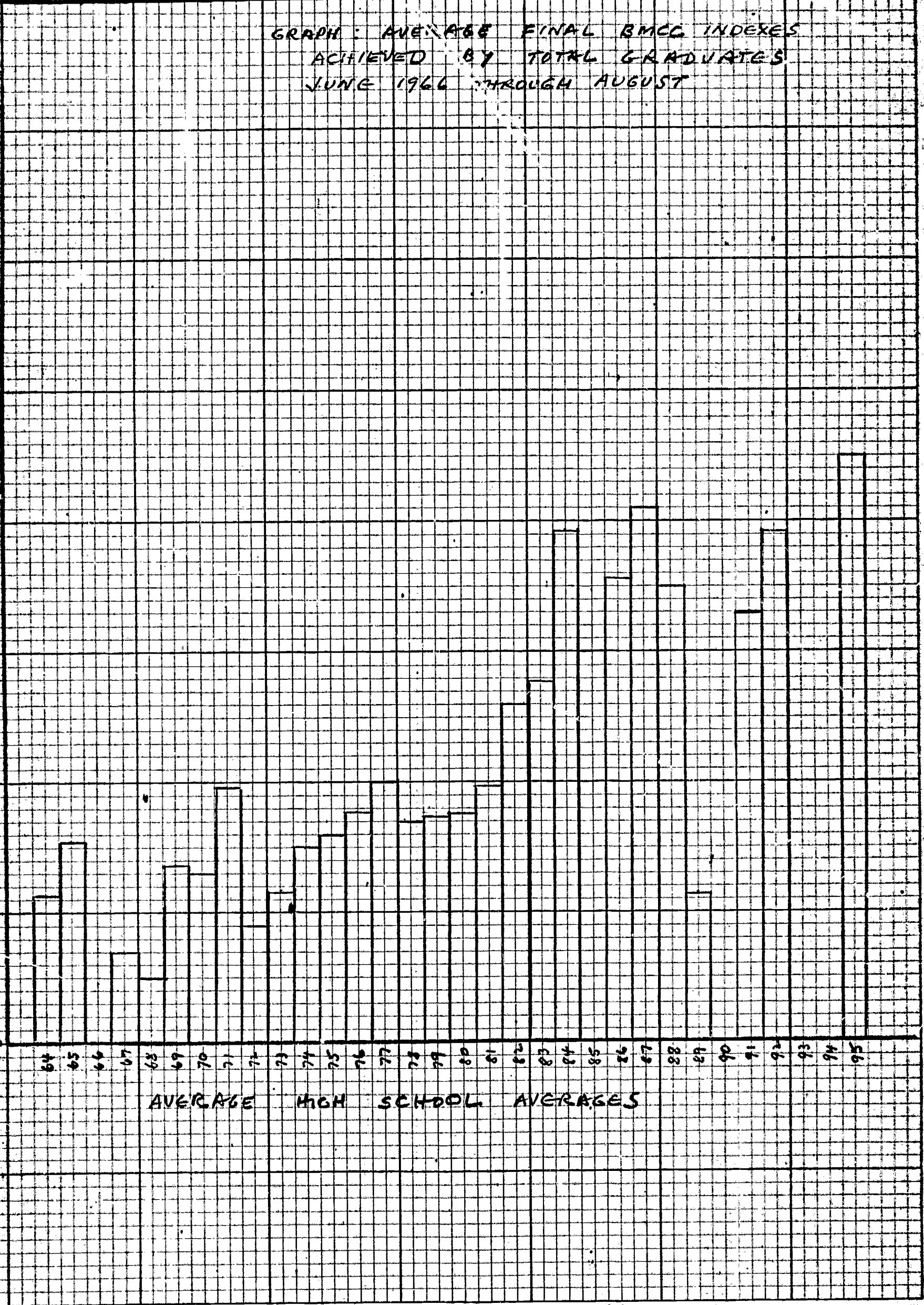
GRAPH : AVERAGE FINAL BMCC INDEXES ACHIEVED BY
TOTAL , MALE AND FEMALE GRADUATES JUNE 1966
THROUGH AUGUST 1967 BY AVERAGE HIGH SCHOOL
AVERAGES

[ ] = TOTAL

MALE

FEMALE

AVERAGE HIGH SCHOOL AVERAGES

Variation among the indexes of the boys and the girls was definite. The girls showed a wider range (a spread of ~~total~~ 0.49 points as against 0.25 point spread for boys) and substantially higher scores (the range of indexes for the girls was 2.46 to 2.95 while the boys clustered between 2.35 and 2.60).

Achievement by curriculum is summarized from Table 4 as follows:

Curriculum	Average BMCC Index		
	Total	Male	Female
Liberal Arts	2.57	2.59	2.56
Accounting	2.53	2.47	2.65
Data Processing	2.52	2.54	2.48
Secretarial Science	2.64	--	2.64
Business Technologies			
Advertising	2.51	2.43	2.75
Banking	2.51	2.42	2.62
Marketing	2.42	2.40	2.49
Small Bus. Oper.	2.46	2.46	--

With the exception of Liberal Arts and Data Processing the girls did substantially better than the boys, most markedly in Advertising, Banking and Accounting.

Secretarial Science graduates achieved the highest average index (2.64) and Marketing (2.42) and Small Business Operation (2.46) the lowest. All other curricula clustered within a 0.06 index range of 2.51 and 2.57.

Variation was equally marked among the curriculum by graduating class (See Table 5). These can by summarized for total graduates as follows.

Curriculum	Graduating Class				
	August 1967	June 1967	January 1967	August 1966	June 1966
	Total				
Liberal Arts	2.43	2.56	2.74	2.52	2.62
Accounting	2.68	2.58	--	2.16	2.58
Data Processing	2.13	2.54	--	--	2.53
Secretarial Science	2.69	2.63	--	--	--
Business Technologies					
Advertising	--	2.44	--	--	2.56
Banking	--	2.51	--	--	--
Marketing	2.30	2.42	--	2.05	2.49
Small Bus. Oper.	2.24	2.73	--	--	--

It is highly interesting that indexes in every curriculum deteriorated between June 1966 and June 1967, when the major classes graduated, except for Data Processing, which just about held its own. It is also of interest that the two newer

their   *and Accounting*

	Initials	Date
Prepared By		
Approved By		

Table 4. PART 1.

Average BMCC Indexes, By High School Average, By Curriculum
BMCC Graduates : June 1966 through August 1967

	LIBERAL ARTS			ACCOUNTING			DATA PROCESSING		
H.S. Average	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
4.0-9	— —	— —	— —	— —		— —	—	—	—
5.0-9	— —	— —	— —	— —		— —	—	—	—
7.0-9	(1) 2.01	(1) 2.01	— —	— —		— —	—	—	—
8.0-9	(1) 2.19	— —	(1) 2.19	(2) 2.18	(2) 218	— —	—	—	—
9.0-9	(1) 2.63	(1) 2.63	— —	(2) 2.37	(2) 237	— —	(2) 234	(2) 234	—
70.0-9	(4) 2.41	(3) 2.44	(1) 2.32	(2) 2.83	(1) 300	(1) 245	(4) 240	(3) 238	(1)
71.0-9	(3) 2.27	(2) 2.40	(1) 2.02	(2) 2.48	(2) 248	— —	(4) 267	(4) 267	—
72.0-9	(3) 2.16	(3) 2.16	— —	(4) 2.31	(3) 226	(1) 245	(1) 218	(1) 218	—
73.0-9	(3) 2.54	(3) 2.54	— —	(5) 2.41	(5) 241	— —	(6) 234	(4) 235	(2)
74.0-9	(10) 2.40	(7) 2.52	(3) 2.12	(7) 2.33	(5) 233	(2) 232	(7) 265	(6) 264	(1)
75.0-9	(10) 2.41	(5) 2.34	(5) 2.47	(10) 2.56	(10) 256	— —	(5) 257	(4) 259	(1)
76.0-9	(24) 2.46	(8) 2.50	(16) 2.44	(16) 2.59	(8) 236	(8) 281	(4) 257	(2) 283	(2)
77.0-9	(17) 2.68	(11) 2.67	(6) 2.70	(6) 2.52	(5) 254	(1) 245	(4) 270	(4) 270	—
78.0-9	(21) 2.52	(9) 2.60	(12) 2.45	(9) 2.51	(5) 267	(4) 231	(3) 239	(3) 239	—
79.0-9	(19) 2.68	(10) 2.74	(9) 2.61	(6) 2.41	(3) 249	(3) 233	(2) 223	— —	(2)
80.0-9	(8) 2.53	(2) 2.70	(6) 2.48	(5) 2.60	(1) 209	(4) 273	(2) 283	(1) 271	(1)
81.0-9	(7) 2.62	(2) 2.83	(5) 2.54	(3) 2.36	(2) 218	(1) 275	(2) 235	(1) 239	(1)
82.0-9	(5) 2.85	(-) —	(5) 2.85	(2) 2.64	(1) 295	(1) 233	(2) 278	— —	(2)
83.0-9	(11) 2.84	(4) 2.69	(7) 2.92	(3) 2.90	— —	(3) 290	—	—	—
84.0-9	(3) 3.00	(2) 2.98	(1) 3.06	(2) 2.97	— —	(2) 297	—	—	—
85.0-9	(1) 2.61	— —	(1) 2.61	— —	— —	— —	—	—	—
86.0-9	(2) 3.07	(1) 3.46	(1) 2.67	— .. —	— —	— —	—	—	—
87.0-9	(1) 3.67	— —	(1) 3.67	(2) 3.10	(2) 310	— —	—	—	—
88.0-9	— —	— —	— —	(1) 2.74	— —	(1) 274	(1) 287	— —	(1)
89.0-9	(1) 2.21	— —	(1) 2.21	— —	— —	— —	(1) 246	— —	(1)
91.0-9	— —	— —	— —	— —	— —	— —	—	—	—
92.0-9	— —	— —	— —	— —	— —	— —	(1) 312	— —	(1)
95.9-9	— —	— —	— —	— —	— —	— —	—	—	—
Average	(156) 2.57	(74) 2.59	(82) 2.56	(89) 2.53	(57) 247	(32) 265	(51) 252	(35) 254	(16)

PART 2

( ) no. Students in Category

#	SECRETARIAL SCIENCE TOTAL: MALE	ADVERTISING TOTAL		ADV. MALE		ADV. FEMALE		BANKING TOTAL		BANK. MALE		BANK. FEMALE		MARKETING TOTAL		MKT. MALE		MKT. FEMALE		SMALL BUSINESS OP. TOTAL: MALE		CORRECTION TOTAL: MALE	
1	—	(1)	234	(1)	234	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	(1)	247	(1)	247	—	—	—	—	—	—
3	240	—	—	—	—	—	—	—	—	—	—	—	—	(1)	211	(1)	—	—	—	(1)	242	—	—
4	—	(1)	204	(1)	204	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	217	—	—	—	—	—	—	—	—	—	—	—	—	(1)	201	(1)	201	—	—	(1)	212	—	—
7	241	(1)	312	(1)	312	—	—	(1)	321	(1)	321	—	—	(2)	238	(2)	238	—	—	(2)	255	(1)	302
8	245	(2)	220	(2)	220	—	—	—	—	—	—	—	—	(5)	231	(3)	239	(4)	219	(1)	223	—	—
9	224	(4)	237	(4)	237	—	—	(2)	219	(1)	230	(1)	208	(1)	216	(1)	216	—	—	—	—	—	—
10	246	—	—	—	—	—	—	(2)	222	(2)	222	—	—	(4)	254	(2)	235	(2)	273	(3)	241	—	—
11	249	(3)	237	(2)	215	(1)	280	—	—	—	—	—	—	(4)	247	(4)	247	—	—	—	—	—	—
12	273	(2)	245	(1)	285	(1)	205	(1)	216	(1)	216	—	—	(1)	254	(1)	254	—	—	—	—	—	—
13	240	(4)	238	(4)	238	—	—	—	—	—	—	—	—	(3)	264	(2)	273	(1)	246	(1)	306	—	—
14	258	(2)	279	(1)	336	(1)	222	—	—	—	—	—	—	(1)	268	—	—	(1)	268	—	—	—	—
15	248	(2)	223	(2)	223	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16	253	—	—	—	—	—	—	—	—	—	—	—	—	(1)	238	(1)	—	—	—	—	—	—	—
17	250	(2)	289	(1)	271	(1)	306	(2)	280	—	—	(2)	280	—	—	—	—	—	—	—	—	—	—
18	340	(1)	315	—	—	(1)	215	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19	284	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	344	(1)	334	—	—	(1)	334	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	317	(1)	263	—	—	(1)	263	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	349	—	—	—	—	—	—	(1)	280	—	—	(1)	280	—	—	—	—	—	—	—	—	—	—
24	354	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	234	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26	299	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	335	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
29	—																						
30	464	(27)	251	(20)	243	(7)	275	(9)	251	(5)	242	(4)	262	(73)	242	(19)	240	(6)	249	(9)	246	(1)	302
31																							

Table 5.   PART 1

Summary of Average BMCC Indexes Achieved
by Graduating Class, Curriculum, and High School Average

	Grand Total		1 Liberal Arts		2 Accounting		4 Curr... Data Process	
Graduating Class	High School Averages	BMCC Index	HS av	BMCC Index	HS av	BMCC Index	HS av	BMCC Index
							T O	
August 1967	75.90	2.49	7665	243	7619	248	7300	
June 1967	77.65	2.57	7782	256	7731	258	7893	
January 1967	77.45	2.74	7745	274	—	—	—	
August 1966	77.17	2.39	7827	252	7585	216	—	
June 1966	77.20	2.55	7932	262	7699	258	7399	
av - all classes	77.30	2.54	7815	257	7705	253	7620	
							M	
August 1967	74.38	2.42	7560	250	7548	251	7300	
June 1967	75.88	2.52	7716	259	7662	252	7658	
January 1967	77.33	2.60	7733	260	—	—	—	
August 1966	75.72	2.35	7737	251	7277	207	—	
June 1966	75.70	2.53	7822	264	7562	252	7331	
av - all classes	75.67	2.51	7722	259	7594	247	7461	
							F E M	
August 1967	78.13	2.59	7831	232	7761	304	—	
June 1967	79.09	2.60	7841	252	7905	270	8258	
January 1967	77.64	2.95	7764	295	—	—	—	
August 1966	79.35	2.46	7949	254	7893	224	—	
June 1966	79.17	2.58	8000	261	79-7	250	759	
av - all classes	79.01	2.60	7899	256	79-2	265	7967	

	5		6	7	8		9	10	11	12	
	Personal Service		Business Technologies								
		BMCC Index	Advertising		Banking		Marketing		Small Bus Ofc		
			HS av	BMCC Index	HS av	BMCC Index	HS av	BMCC Index	HS av	BMCC Index	
1											
2	L										
3	7817	269	—	—	—	—	7170	230	7170	224	
4	7908	263	7324	244	7690	251	7382	242	7399	273	
5	—	—	—	—	—	—	—		—	—	
6	—		—		—	—	7208	205	—	—	
7	—	—	7832	256	—	—	7496	249	—		
8	7873	264	7644	251	7690	251	7399	242	7272	246	
9											
10	L	E									
11	—	—	—	—	—	—	7170	230	7170	224	
12	—	—	7294	239	7392	242	7351	241	7399	273	
13	—	—	—	—	—	—	—	—	—	—	
14	—	—	—	—	—	—	7208	205	—	—	
15	—	—	7666	245	—	—	7509	248	—	—	
16	—	—	7498	243	7392	242	7366	240	7272	246	
17											
18	E										
19	7817	269	—	—	—	—	—	—	—	—	
20	7904	263	7590	280	8063	262	7550	243	—	—	
21	—	—	—	—	—	—	—	—	—	—	
22	—	—	—	—	—	—	—	—	—	—	
23	—	—	8138	275	—	—	7481	250	—	—	
24	7893	264	8060	275	8063	262	7504	249	—	—	
25											
26											
27											
28											
29											
30											
31											

curricula which had no graduates in June 1966 achieved the
highest indexes in June 1967: Secretarial Science 2.63 and
Small Business Operation 2.73. This result could be a function
of grading, student body, sex, or number of graduates.

The August graduates in both 1966 and 1967, in general,
achieve substantially lower indexes than June graduates. This
is to be expected since many of these are students who needed
either extra credits or additional quality points to graduate.

3. Correlation Ratios between Index and High School Averages

The widespread character of achievement by high school average is expressed
graphically in the three scatter diagrams (Charts 2, 5 and 6) the
relationship between the high school averages with which our graduates
entered and their final cumulative indexes. Chart 2 shows this relationship
for all graduates; chart 5 for male and chart 6 for female graduates.

Instances of higher achievement, as measured by the indexes, seem to be
as likely among the lower high school averages as among the higher.
Examination of chart 2 on total graduates shows that students with the
four highest high school averages scored much lower than students with
far lower averages, as the following indicates:

High School Average	No. Instances of Equal or Higher Indexes Among Other Averages	Range of H.S. Average with Higher Indexes
95%	12	77% – 87%
92%	30	70% – 95%
91%	60	70% – 95%
89%	202	69% – 95%

Close to half of all graduates (46.8%) achieved equal or better indexes
than the graduates with the four highest high school averages, which
ranged between 89% and 95%.

Similar variation is found among the indexes for boys and girls although,
as the lines of regression in charts 5 and 6 indicate, girls tend to
conform more closely to expected patterns of achievement than boys.

It is no surprise, therefore, to find that there is a weak association
between high school averages and indexes. The overall coefficient of
rank correlation for the school is 0.492; for boys it is 0.431 and for
girls 0.548.

Coefficients of rank correlation are summarized by graduating class
and curriculum and by sex in the following text table.

Chart 6

SCATTER DIAGRAM
HIGH SCHOOL AVERAGES
VS. BMCC INDEXES —
MALE GRADUATES
JUNE 1966 THROUGH AUGUST
1967

Line of regression

$$\hat{Y} = -2.13 + 0.319 X$$

Coefficient of correlation

$$r = 0.431$$

HIGH SCHOOL AVERAGE

BMCC INDEX

SCATTER DIAGRAM
HIGH SCHOOL AVERAGE
VS BMCC INDEXES
FEMALE GRADUATES
JUNE 1966 THROUGH
AUGUST 1967

Line of regression

$$y = -3.04 + 0.470 X$$

Coefficient of correlation

$$r = 0.548$$

$y = -3.04 + 0.470 X$

BMCC INDEX

360

340

320

300

280

260

240

220

200

63 64 65 66 67 68 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95

HIGH   SCHOOL   AVERAGE

Selected Correlation Ratios: Final Indexes of BMCC Graduates
June 1966 Through August 1967 By High School Average
and SAT Scores, By Graduating Class and Curriculum
Total, Male, and Female Graduates

	Coefficient of Rank Correlation		
Item	Total	Male	Female
High School Average vs BMCC Index			
Grand Total	0.492	0.431	0.548
By Graduating Class			
August 1967	0.511	0.873	0.355
June 1967	0.750	0.339	0.823
January 1967	0.393	0.484	0.598
August 1966	0.547	0.496	0.776
June 1966	0.572	0.797	0.401
By Curriculum			
Accounting	0.383	0.284	0.517
Advertising	0.453	0.310	0.559
Banking	0.261	*	*
Data Processing	0.496	0.338	0.542
Liberal Arts	0.659	0.601	0.823
Marketing	0.498	0.412	0.564
Secretarial Science	0.659	---	0.659
Small Business Operation	0.642	0.642	---
By SAT Scores			
Verbal	0.151	0.206	0.115
Mathematics	0.220	0.168	0.286
Combined Verbal & Math	0.271	0.329	0.238

* Sample too small for significant correlation ratios.

Our second major graduating class of June 1967 shows a greater tendency
towards conformity to expected scholastic patterns than did the graduating
class of June 1966. The coefficient of rank correlation rose form 0.572
in June 1966 to 0.750 in June 1967. This rise was apparently strongly
influenced by the performance of the girls which rose from 0.401 in June
1966 to 0.823 in June 1967. The correlation ratio for the boys declined
during the same period from 0.797 to 0.339. This may indicate that boys
have a greater variety of influences on their scholastic behavior at the
present time than do girls.

Because of the substantially smaller number of graduates involved in the
other graduating periods, their correlation coefficients are subject to
wider fluctuation.

Liberal Arts and Secretarial Science graduates showed the highest degree
of association between high school averages and indexes. Again, it was
the influence of the girls which brought up the indexes. Secretarial
Science graduates were all girls and the girls in Liberal Arts showed
a correlation of 0.823 vs 0.601 for the boys. The business students
showed smaller degrees of association between expectancy and performance,
indicating that, perhaps, here too, additional influences are present in
scholastic behavior. Again, girls had higher coefficient ratios than
boys in every curriculum.

4.   Correlation Ratios between Indexes and SAT Scores

The scatter diagram for SAT scores vs BMCC indexes shows the practical
absence of correlation (See Chart 7). A student with a combined verbal
and mathematics SAT score of 525 achieved a 3.05 index while at the other
end of the scale, a student with a 1240 combined SAT score finished
with a 2.39 index. The highest indexes, 3.40 and above, were attained
by students with combined SAT scores ranging between 750 and 1000 while
the lowest achievers, those with indexes of 2.30 or below had combined
SAT scores that ranged between 460 and 1100.

The coefficients of rank correlation corroborate these observations
(See text table on p. 21). The degree of association for verbal SAT
scores and indexes is 0.151 with the boys showing a slightly higher
ratio of 0.206. The correlation between the mathematics SAT scores
and indexes (r = .022) shows a small advance over the verbal scores.
In this instance, the total was influenced by the girls (r = 0.286).
Even though the correlation coefficients are so slight, it is interesting
to observe that our boys tended to correlate more closely with verbal
facility and girls with mathematical.

When the verbal and the mathematical scores are combined they form a new
qualitative unit. Overall, the combined coefficient of correlation for
the combined SAT scores and BMCC indexes amounts to 0.271. Here, the
boys were distinctly higher than the girls: 0.329 vs 0.238.

COMBINED SAT SCORES vs BMCC
INDEXES — TOTAL GRADUATES
JUNE 1966 THROUGH AUGUST 1967

Coefficient of Correlation
$r = 0.271$

BMCC INDEX

COMBINED SAT SCORES