

University of Mississippi

eGrove

---

AICPA Committees

American Institute of Certified Public Accountants (AICPA) Historical Collection

---

1950

## College accounting testing program bulletin no. 10; Results of the fall, 1950, college accounting testing program in ninety-eight colleges

American Institute of Accountants. Committee on Selection of Personnel

Follow this and additional works at: [https://egrove.olemiss.edu/aicpa\\_comm](https://egrove.olemiss.edu/aicpa_comm)



Part of the [Accounting Commons](#), and the [Taxation Commons](#)

---

### Recommended Citation

American Institute of Accountants. Committee on Selection of Personnel, "College accounting testing program bulletin no. 10; Results of the fall, 1950, college accounting testing program in ninety-eight colleges" (1950). *AICPA Committees*. 245.

[https://egrove.olemiss.edu/aicpa\\_comm/245](https://egrove.olemiss.edu/aicpa_comm/245)

This Book is brought to you for free and open access by the American Institute of Certified Public Accountants (AICPA) Historical Collection at eGrove. It has been accepted for inclusion in AICPA Committees by an authorized administrator of eGrove. For more information, please contact [egrove@olemiss.edu](mailto:egrove@olemiss.edu).



THE AMERICAN INSTITUTE OF ACCOUNTANTS  
COLLEGE ACCOUNTING TESTING PROGRAM

Bulletin No. 10

RESULTS OF  
THE FALL, 1950, COLLEGE ACCOUNTING TESTING PROGRAM  
IN NINETY-EIGHT COLLEGES

Prepared by  
Committee on Selection of Personnel  
21 Audubon Avenue  
New York 32, N. Y.  
January, 1951



THE AMERICAN INSTITUTE OF ACCOUNTANTS  
COLLEGE ACCOUNTING TESTING PROGRAM

Bulletin No. 10

RESULTS OF  
THE FALL, 1950, COLLEGE ACCOUNTING TESTING PROGRAM  
IN NINETY-EIGHT COLLEGES

Prepared by  
Committee on Selection of Personnel  
21 Audubon Avenue  
New York 32, N.Y.  
January, 1951

## CONTENTS

	Page
I. INTRODUCTION . . . . .	1
II. SUMMARY OF TEST RESULTS . . . . .	3
III. DISTRIBUTIONS OF TEST SCORES IN INDIVIDUAL COLLEGES . . . . .	9
IV. THE RELATIONSHIP OF ACCOUNTING TEST SCORES TO JOB PERFORMANCE IN THE FIELD OF PUBLIC ACCOUNTING . . . . .	21

Committee on Selection of Personnel

Raymond G. Ankers, Chairman

Thomas H. Carroll

Samuel J. Duboff

Thomas D. Flynn

Russell H. Hassler

S. Wesley Marcus

Leo A. Schmidt

James W. Strudwick

John L. Carey, Executive Director

Project Staff

Ben D. Wood, Director

Arthur E. Traxler, Assistant Director

Robert Jacobs, Administrative Assistant

Geraldine Spaulding, Test Program Supervisor

Thomas Mahorney, Assistant Supervisor

Cooperating Colleges and Universities

Alabama Polytechnic Institute  
University of Arizona  
Armstrong College

Baker University  
Baldwin-Wallace College  
Baylor University  
Bellarmine College  
Boston College  
Bowling Green State University  
Bradley University  
Brigham Young University  
Bryant College  
University of Buffalo

California College of Commerce  
Chanute Junior College  
University of Chattanooga  
University of Chicago  
College of the City of New York

University of Dayton  
University of Delaware  
University of Denver  
De Paul University  
University of Detroit  
Drake University  
Duquesne University

Emory University

Fairleigh Dickinson College

Gannon College  
George Peabody College for Teachers

Harpur College  
Hartford Institute of Accounting  
Hillsdale College  
Hope College

Iona College

Kent State University

Lehigh University  
University of Louisville

Marquette University  
University of Maryland  
Memphis State College  
Miami-Jacobs College  
Miami University  
Middlebury College  
Mississippi Southern College  
Mississippi State College  
Montana State College  
Morse College

New Haven YMCA Junior College  
University of New Mexico

New York State Agricultural and  
Technical Institute (Alfred)  
North Texas State College

Ohio State University  
Oklahoma City University  
Olympic Junior College

University of Pennsylvania  
Pennsylvania State College  
Peirce School of Business Administration  
Providence College

Queens College

Regis College (Colorado)  
Rhode Island State College  
Rice Institute  
Rider College  
Rutgers University

St. Edward's University  
St. John's University  
St. Joseph's College (Indiana)  
St. Louis University  
St. Peter's College  
Salmon P. Chase College  
University of San Francisco  
Sawyer Schools of Business  
Seton Hall University  
Siena College  
Southern Illinois University  
Southern Methodist University  
Spencerian College  
Strayer College of Accountancy  
Suffolk University  
Susquehanna University  
Syracuse University

Temple University  
Tennessee Agricultural and  
Industrial State College  
University of Texas  
Texas Christian University  
Texas Technological College  
Tulane University of Louisiana

Union Junior College

University of Vermont  
University of Virginia  
Virginia Polytechnic Institute

Washington and Lee University  
Wayne University  
Western Reserve University  
West Virginia University  
Wheaton College  
College of William and Mary

Xavier University

# I

## INTRODUCTION

This bulletin contains a statistical summary of the results of the 1950 Fall College Accounting Testing Program. This was the fifth fall testing program for accounting students. The first one was held in 1946, with twenty-six participating colleges. The 1950 program included ninety-eight colleges, a larger number than in any preceding fall program. The names of the participating colleges are listed at the beginning of the bulletin.

The total number of tests administered in the ninety-eight colleges was 13,362, which was less by 1,183 tests than the number given last fall. It is thought that this small decrease in tests administered probably reflects to some extent the tendency toward somewhat smaller enrollments in the colleges, as the influence of the veteran registration which was very large shortly after the war continues to drop off.

A larger proportion of the tests was scored in the project office this fall than last fall or in any preceding fall program. Approximately 77 per cent of the tests were scored centrally this year, as compared with 65 per cent in 1948 and 67 per cent in 1949.

The numbers of the different kinds of tests administered were as follows: Orientation Test, 10,630; Achievement Test, Level I, 1,121; Achievement Test, Level II, 299; Strong blank, 1,312. The Orientation Test, or test of general mental ability slanted toward the business field, is stressed in the fall program, while the Achievement Tests are emphasized in the spring program.

It is anticipated that the Achievement Test, Level II, as well as the Orientation Test, will be used rather extensively in a midyear testing program for seniors which will take place for the first time in January, 1951.

Section II of the present bulletin contains a general statistical summary of the results of the Orientation and Achievement Tests. Comparative charts showing under code numbers the distributions of scores for individual colleges are given in Section III. Each college will be apprised of its own code number. It is hoped that each college will regard the standing of its classes in the comparative charts as confidential information which will not be divulged except for local use by the faculty members concerned.

The final section of the bulletin contains a research article prepared by Dr. Robert Jacobs of the Project Office staff on the value of the accounting tests for predicting success on the job.





## II

### SUMMARY OF TEST RESULTS

Tables I and II show the summary distributions of scores on the Orientation Test, Form B, made by first-year, second-year, third-year, and senior students of accounting. Verbal and quantitative scores are shown in Table I, and total scores in Table II. Form B, which was the recommended form, was administered to more than 8000 first-year students this fall, and was given also to a total of over 800 more advanced students, divided among second-year, third-year, and senior classes.

A number of colleges used Form A or Form C of the Orientation Test. The number of students taking Form C was quite small, so that no distributions are presented for the results on that form. Of those taking Form A, only small numbers were classified as second-year, third-year, and senior students. However, more than 900 first-year students were given Form A; their results are shown in Table III.

The dotted lines across the distributions in Tables I and II represent the medians for the fall, 1947, administration of Form B of the Orientation Test to first-, second-, and third-year classes. No previous fall median is available for seniors. The broken lines show spring medians (1947 and 1948 combined) for all four classifications. The medians for this fall are not only lower than for the spring administration (as might be expected), but are also noticeably lower than for the 1947 fall administration, except in the third-year verbal and total scores.

In Table III, the dotted lines, showing medians for the combined fall programs of 1946, 1947, and 1948, provide a comparison with results of earlier administrations of Form A. Here again, as on Form C, the medians are considerably lower this year.

Table IV shows the results of first-year and second-year students on the Achievement Test, Level I, Form A. The broken lines represent the medians for the spring, 1949, administration of the test. The first-year median is very slightly higher this fall than in the spring of 1949, while the second-year median is slightly lower. Table V gives the distribution of the rather small number of students taking the Achievement Test, Level II, Form D. The median for this fall is substantially higher than the median for the March, 1950, administration of this test, as shown by the broken line across the table.

TABLE I

SUMMARY DISTRIBUTIONS OF PART SCORES MADE ON ORIENTATION TEST, FORM B,  
BY FIRST-YEAR, SECOND-YEAR, THIRD-YEAR, AND SENIOR STUDENTS OF ACCOUNTING, FALL, 1950

V E R B A L					Q U A N T I T A T I V E				
Score	1st year	2nd year	3rd year	Senior	Score	1st year	2nd year	3rd year	Senior
99-100									
96				1					
93									
90	2				30	7		1	1
87	4	1	2		29	25	4	7	3
84	11	2		4	28	41	6	7	2
81	17	2			27	32	2	4	4
78	26	5	8	4	26	79	6	4	13
75	33	1	4	3	25	119	8	6	10
72	66	3	5	1	24	164	13	8	12
69	81	8	7	6	23	182	18	16	14
66	97	10	7	8	22	135	12	7	4
63	122	12	9	12	21	265	16	10	15
60	163	17	14	18	20	274	16	10	14
57	213	10	16	15	19	285	22	16	18
54	239	17	14	20	18	355	27	19	21
51	294	21	20	24	17	329	17	8	18
48	337	24	17	22	16	399	26	18	14
45	418	17	19	18	15	461	24	23	16
42	434	23	19	25	14	492	23	11	14
39	495	32	14	14	13	573	22	10	12
36	567	21	18	14	12	527	17	9	8
33	582	21	4	14	11	529	15	12	9
30	606	23	14	8	10	487	16	9	6
27	569	27	11	10	9	507	23	5	10
24	527	24	3	5	8	493	5	4	8
21	506	13	5	2	7	394	4	6	5
18	513	12	2	4	6	321	8	2	1
15	413	9	2	2	5	245	8	2	3
12	313	6	2	1	4	190	4	1	2
9	262	3	1	2	3	123	3	1	
6	150	3			2	87	1		
3	103				1	52			
0-2	54				0	45	1	1	
Total	8217	367	237	257	Total	8217	367	237	257
Q3	45.5	53.5	59.4	58.6	Q3	17.7	20.6	22.1	21.9
Md	33.5	41.0	48.8	49.3	Md	13.2	16.4	17.6	18.1
Q1	22.5	29.4	38.5	39.5	Q1	9.2	12.2	13.7	14.0
Range	0-90	6-87	11-88	11-95	Range	0-30	0-29	0-30	4-30
10 %ile	14.4	21.9	29.4	29.9	10 %ile	6.2	9.1	10.2	9.7
90 %ile	57.2	64.8	70.0	66.5	90 %ile	21.9	24.2	25.9	25.7

..... Medians, fall, 1947

----- Medians, combined spring programs, 1947 and 1948

TABLE II

SUMMARY DISTRIBUTIONS OF TOTAL SCORES MADE ON ORIENTATION TEST, FORM B,  
BY FIRST-YEAR, SECOND-YEAR, THIRD-YEAR, AND SENIOR STUDENTS OF ACCOUNTING, FALL, 1950

T O T A L				
Score	1st year	2nd year	3rd year	Senior
128-130				
124				1
120				1
116	3	1	1	2
112	5			1
108	13	1	3	2
104	21	3	4	2
100	28	4	3	3
96	50	6	5	3
92	59	7	8	7
88	114	10	8	6
84	125	10	15	10
80	147	14	12	18
76	198	15	12	19
72	245	18	15	26
68	355	17	18	23
64	369	29	22	29
60	423	27	25	23
56	500	34	14	18
52	581	26	18	13
48	601	25	14	15
44	667	22	13	10
40	612	21	6	5
36	628	26	7	9
32	582	16	7	7
28	530	14		2
24	425	11	2	3
20	355	5	4	2
16	272	2		
12	153	1	1	
8	81	2		
4	63			
0-3	12			
Total	8217	367	237	257
Q3	61.0	71.4	79.9	77.6
Md	46.4	57.5	65.4	67.0
Q1	33.1	42.8	53.2	55.5
Range	0-119	10-116	14-118	20-121
10 %ile	22.7	32.4	41.8	42.2
90 %ile	75.0	86.1	92.2	87.7

..... Medians, fall, 1947

----- Medians, combined spring programs, 1947 and 1948

TABLE III

SUMMARY DISTRIBUTIONS OF PART AND TOTAL SCORES MADE ON ORIENTATION TEST, FORM A,  
BY FIRST-YEAR STUDENTS OF ACCOUNTING, FALL, 1950

VERBAL		QUANTITATIVE		TOTAL	
Score	1st year	Score	1st year	Score	1st year
99-100				128-130	
96				124	
93				120	
90		30		116	
87		29		112	
84		28		108	
81	2	27		104	
78	3	26		100	1
75	2	25	2	96	3
72	3	24	4	92	2
69	3	23	6	88	4
66	5	22	9	84	9
63	14	21	15	80	5
60	9	20	14	76	13
57	11	19	11	72	12
54	14	18	17	68	19
51	17	17	27	64	20
48	21	16	29	60	33
45	29	15	44	56	40
42	36	14	63	52	52
39	45	13	56	48	66
36	60	12	64	44	69
33	63	11	58	40	75
30	82	10	80	36	86
27	61	9	78	32	79
24	68	8	60	28	95
21	93	7	44	24	66
18	76	6	51	20	54
15	60	5	45	16	42
12	53	4	38	12	32
9	38	3	37	8	20
6	22	2	15	4	5
3	12	1	11	0-3	1
0-2	1	0	25		
Total	903	Total	903	Total	903
Q3	38.4	Q3	14.2	Q3	51.2
Md	28.4	Md	10.6	Md	38.7
Q1	19.6	Q1	7.1	Q1	28.2
Range	0-83	Range	0-25	Range	0-100
10 %ile	13.0	10 %ile	4.1	10 %ile	19.1
90 %ile	50.0	90 %ile	17.5	90 %ile	63.7

..... Medians, combined fall programs, 1946, 1947, and 1948

TABLE IV

SUMMARY DISTRIBUTIONS OF TOTAL SCORES MADE ON ACHIEVEMENT TEST, LEVEL I, FORM A,  
BY FIRST-YEAR AND SECOND-YEAR STUDENTS OF ACCOUNTING, FALL, 1950

Score	1st year	2nd year
120		
117		
114		
111		
108		
105	1	
102	4	2
99	6	1
96	3	3
93	5	2
90	7	7
87	6	5
84	12	11
81	16	6
78	29	14
75	25	19
72	32	6
69	21	16
66	24	9
63	41	13
60	53	10
57	41	12
54	45	13
51	65	10
48	32	9
45	41	3
42	53	6
39	59	6
36	47	4
33	45	1
30	38	1
27	30	
24	24	
21	16	
18	6	
15	9	
12	4	
9	2	
6	2	
3	2	
0-2	2	
Total	848	189
Q3	64.5	78.8
Md	51.6	68.2
Q1	38.0	55.7
Range	0-105	31-104
10 %ile	28.8	45.9
90 %ile	78.4	87.7

----- Medians, spring, 1949

TABLE V

SUMMARY DISTRIBUTION OF TOTAL SCORES MADE ON ACHIEVEMENT TEST, LEVEL II, FORM D,  
BY SENIORS IN ACCOUNTING, FALL, 1950

Score	Senior
100	
98	1
96	1
94	
92	2
90	3
88	1
86	4
84	4
82	3
80	
78	8
76	5
74	4
72	9
70	3
68	3
66	7
64	7
62	
60	4
58	1
56	3
54	5
52	7
50	3
48	4
46	3
44	6
42	4
40	
38	4
36	1
34	5
32	3
30	3
28	1
26	1
24	3
22	2
20	
18	
16	
14	1
12	1
10	
8	
6	
4	
2	
0-1	
Total	130
Q3	75.8
Md	63.0
Q1	45.2
Range	12-99
10 %ile	32.7
90 %ile	85.5

----- Median, March, 1950



### III

#### DISTRIBUTIONS OF TEST SCORES IN INDIVIDUAL COLLEGES

Distributions of total scores of first-year, second-year, third-year, and senior students of accounting on Form B of the Orientation Test, arranged according to colleges, are shown in Tables VI, VII, VIII, and IX. Distributions for the colleges using Form A of the Orientation Test with their first-year students are shown in Table X. Tables XI and XII give the distributions for colleges using the Achievement Test, Level I, Form A, and Table XIII shows the distributions for colleges giving the Achievement Test, Level II, Form D, to their graduating senior students. The numbers across the top of the charts are code numbers identifying the individual colleges. Each college has been informed of its own code number.

The medians and the first and third quartiles for the total distributions are indicated by the broken lines running horizontally across each chart. The median score for each college is shown by the short horizontal line to the right of the distribution, and the range of the middle 50 per cent of the scores is indicated by the vertical line parallel to the distribution.

Although the different colleges vary quite widely in the median scores attained by their classes, there is also a great deal of overlapping of the distributions. For example, in several of the colleges having median scores among the lowest in the group, there are some individual students who do practically as well as the best students in the colleges having the highest medians.

So far as the project office can determine, the distributions for the individual colleges represent complete or nearly complete class groups in almost all cases. All colleges were urged either to test all students at a given level or to advise the project office where selection took place so that unrepresentative groups could be excluded from the norms and the comparative charts. Of the fifty-five replies received (out of ninety-six requested), 68 per cent indicated that the tests were administered on a required basis; in 8 per cent of the cases, the testing was on a voluntary basis, but more than 90 per cent of the students in the class were tested; 23 per cent of the replies indicated that the testing was voluntary, with less than 90 per cent participating, but in most of these cases the participants were considered to be representative. In view of the extent of participation indicated, it is felt that a satisfactory sampling of the various groups has been made.







TABLE VII

DISTRIBUTIONS OF SCORES MADE ON ORIENTATION TEST, FORM B, BY SECOND-YEAR STUDENTS OF ACCOUNTING IN FOURTEEN COLLEGES

Score	1	18	15	23	4	19	7	36	44	46	35	55	57	59	Score
128-130															128-130
124															124
120															120
116	1														116
112															112
108	1														108
104	2	1													104
100		1		1		1		1							100
96		1		1	1				2					1	96
92		2		1		3	1								92
88	1	1	2			3		1					1		88
84		1				4		1							84
80		1			1	6				4					80
76			1			7	1		1	4		1	1		76
72			1	1	1	5				3	1		3		72
68	1			2	2	5			1	4		2			68
64						12		1	2	3		5	3	1	64
60					2	9	1	1	1	6	2	6	1		60
56		1		2		10	1	2	2	3	1	7	4		56
52		1		1	1	5	1	2	3	4		8	2	1	52
48						5	1	1	3	7		9	1	1	48
44						1		1	3	4	2	8	3		44
40						3	1		1	3		5	5	3	40
36				1					1	9	2	10	2	1	36
32			1			1		1	1	3		5	4		32
28										5	1	8			28
24						1			1			5	2	2	24
20								1		1			2	1	20
16										2					16
12										1					12
8												1		1	8
4															4
0-3															0-3
<b>Total</b>	6	10	5	10	8	76	7	13	19	70	10	80	34	12	<b>Total</b>
<b>Q3</b>						78.9			66.5	69.5		56.6	62.0		<b>Q3</b>
<b>Md</b>	106.0	92.0	78.0	70.0	70.0	66.7	58.0	57.0	55.3	52.0	52.0	47.0	46.7	41.3	<b>Md</b>
<b>Q1</b>						59.2			45.0	38.4		36.4	37.0		<b>Q1</b>
<b>Range</b>	69-116	55-107	34-89	39-101	53-97	24-101	43-93	22-100	25-99	13-87	28-78	10-83	23-91	11-98	<b>Range</b>

TABLE VIII

DISTRIBUTIONS OF SCORES MADE ON ORIENTATION TEST, FORM B, BY THIRD-YEAR STUDENTS OF ACCOUNTING IN FIVE COLLEGES

Score	19	59	46	44	55	Score
128-130						128-130
124						124
120						120
116	1					116
112						112
108	2		1			108
104	4					104
100	1		2			100
96	4					96
92	3	1	3			92
88	3		3			88
84	4		7	2	2	84
80	8		3			80
76	6	1	4			76
72	7		8			72
68	6	3	6	2	1	68
64	7	2	7	2	2	64
60	9	2	11	1	2	60
56	4		9	1		56
52	4		9	1	4	52
48	1	1	4	2	5	48
44	1	2	6		4	44
40			4		2	40
36			1	2	4	36
32	1		2		3	32
28						28
24			1		1	24
20			3		1	20
16						16
12			1			12
8						8
4						4
0-3						0-3
Total	76	12	95	13	31	Total
Q3	87.0		75.6		55.3	Q3
Md	74.9	66.0	62.7	62.0	48.4	Md
Q1	63.6		52.8		38.8	Q1
Range	35-118	44-94	14-108	39-87	21-87	Range



TABLE IX

DISTRIBUTIONS OF SCORES MADE ON ORIENTATION TEST, FORM B, BY SENIORS IN ACCOUNTING IN NINE COLLEGES

Score	9	20	58	67	46	55	44	68	47	Score
128-130										128-130
124										124
120										120
116										116
112					1					112
108					2					108
104			1		1					104
100	1				2					100
96				1	1	1				96
92	1		1	2	2	1				92
88			3		3					88
84	2	1	3		3	1				84
80	2		7		8		1			80
76	4		4		8	1	1		1	76
72	4	5	6	1	6	1		2	1	72
68	2		5	1	9	4		1		68
64	2		5		10	7	1	4		64
60	2		2		13	3	2		1	60
56			2		11	2	2	1		56
52			1		6	3		1	2	52
48			1		7			3	2	48
44	1		1	2	3	1		1		44
40			3		2					40
36					4	3		1	1	36
32			2		1	3			1	32
28				1		1				28
24				1	1			1		24
20						1		1		20
16										16
12										12
8										8
4										4
0-3										0-3
Total	21	6	47	9	104	33	7	16	9	Total
Q3	81.5		81.9		78.5	68.6		67.0		Q3
Md	75.5	74.4	73.0	70.0	65.6	63.3	63.0	56.0	53.0	Md
Q1	68.5		63.5		56.7	45.0		48.0		Q1
Range	44-100	72-85	33-107	25-98	24-114	20-98	56-82	21-75	34-77	Range

TABLE X

DISTRIBUTIONS OF SCORES MADE ON ORIENTATION TEST, FORM A, BY FIRST-YEAR STUDENTS OF ACCOUNTING IN NINE COLLEGES

Score	82	81	80	83	73	78	79	84	61	Score
128-130										128-130
124										124
120										120
116										116
112										112
108										108
104										104
100				1						100
96	1			1				1		96
92	1			1						92
88	1		2					1		88
84	1	1		1		1		5		84
80	1			1		1	1	1		80
76	4			5				4		76
72	3		3	1		1		4		72
68	3	3	2	4	1		1	5		68
64	5	2	2	6		1	1	3		64
60	11	3	2	6	1			10		60
56	7	7	3	10	2		2	8	1	56
52	6	3	6	18		2	2	15		52
48	8	4	8	12		3	2	26	3	48
44	8	3	4	13	2	1	8	29	1	44
40	9	4	6	20	4		8	24		40
36	4	5	7	20	1	7	5	36	1	36
32	6		4	10	1	7	12	36	3	32
28	2	5	10	14		4	13	42	5	28
24	6	1	3	17	4	2	3	28	2	24
20	2		1	9		4	6	30	2	20
16	1		1	3	1	2	2	28	4	16
12		1	1	2	1	1	2	22	2	12
8			3	1		1	1	13	1	8
4								3	2	4
0-3								1		0-3
Total	90	42	68	176	18	38	69	375	27	Total
Q3	63.1	59.1	54.0	54.4	47.0	46.0	43.9	46.5	35.0	Q3
Md.	51.5	50.0	42.7	42.4	41.0	34.9	34.5	34.3	28.4	Md
Q1	40.7	38.8	31.2	31.4	26.5	27.0	29.0	23.6	17.8	Q1
Range	18-99	14-85	8-91	10-100	15-68	11-85	8-80	0-96	5-59	Range

TABLE XI

DISTRIBUTIONS OF SCORES MADE ON ACHIEVEMENT TEST, LEVEL I, FORM A,  
BY FIRST-YEAR STUDENTS OF ACCOUNTING IN SIXTEEN COLLEGES

Score	15	69	25	70	71	72	73	28	22	74	31	57	75	76	16	77	Score
120																	120
117																	117
114																	114
111																	111
108																	108
105		1															105
102				2		2											102
99	2		1	2		1											99
96			1			1											96
93				1		2					1						93
90		1		1				1			3			1			90
87	1			1		1		1			1			1			87
84	1		2	2		1		1			4			1			84
81		3				1	1	2			6		1	2			81
78	1	5	1	3	3	4	1	3			4			4			78
75	2	4		1	1	3	1	1	1	1	5			5			75
72	2	3		2		8		2		1	8			4			72
69		3		1		3			1		7	1	1	1	1		69
66	2	4	1	2		1		1			9	1	2	1			66
63		5	1	3	3	4		1	1	1	13	2	2	6	2		63
60	3	1		6	1	7		3		1	12	1	4	10	4		60
57	1	1		2		3	3	1	1	1	17	1		7	3		57
54		3		1		7	4	5			13			6	4		54
51			1	2	1	3	2	3	3	2	28	1		16	2	1	51
48				2	2	3	1	1	1	1	12	1	3	4	2		48
45		1				1		2			18	4	1	12	2		45
42				1		1		1	1		23	1	3	17	4		42
39		1	1	1		3		2		1	30	1	3	10	4	2	39
36		1	1	1	1	1	1	2		1	18	3	3	7	6	2	36
33	1	1	2		1	3		2			21	2	1	7	4		33
30		1		2		1	1	2			12	1	2	13	2	1	30
27					1			2			9	2		10	5	1	27
24						2		1	1	2	12		1	4	1		24
21											5		1	8	2		21
18						1				1	1			1	2		18
15		1						1			1		1	3	1	1	15
12											1	1		1	1		12
9			1											1			9
6														2			6
3													1		1		3
0-2														2			0-2
<b>Total</b>	16	42	12	36	16	68	15	39	12	14	296	23	32	166	53	8	<b>Total</b>
<b>Q3</b>	82.5	77.6		82.5	79.0	74.6	59.3	72.4			60.3	57.8	62.3	57.2	54.6		<b>Q3</b>
<b>Md</b>	73.5	69.6	66.0	64.5	64.0	62.1	55.9	54.9	54.0	51.0	47.5	45.4	45.0	44.5	40.1	37.5	<b>Md</b>
<b>Q1</b>	62.0	61.5		54.0	49.5	52.0	52.1	38.6			38.0	35.6	37.0	32.2	30.4		<b>Q1</b>
<b>Range</b>	33-101	16-105	9-101	30-104	29-86	18-104	32-81	17-92	26-77	19-77	12-96	13-71	4-81	0-91	3-69	17-53	<b>Range</b>

TABLE XII

DISTRIBUTIONS OF SCORES MADE ON ACHIEVEMENT TEST, LEVEL I, FORM A,  
BY SECOND-YEAR STUDENTS OF ACCOUNTING IN SEVEN COLLEGES

Score	1	22	25	7	19	17	6	Score
120								120
117								117
114								114
111								111
108								108
105								105
102				2				102
99				1				99
96					3			96
93			1			1		93
90	1	1		1	3		1	90
87				1	3	1		87
84	2	2			6	1		84
81	1				4	1		81
78		1	1	1	7	2	2	78
75	1		1		6	9	1	75
72				3	1	2		72
69				1	8	3	4	69
66				1	6	2		66
63		1		1	4	6	1	63
60			1		3	4	2	60
57			1		5	4	2	57
54				1	4	7	1	54
51					4	6		51
48		1			1	4	3	48
45					1	1		45
42				1		4	1	42
39				1		2	3	39
36				1	1	1	1	36
33						1		33
30							1	30
27								27
24								24
21								21
18								18
15								15
12								12
9								9
6								6
3								3
0-2								0-2
Total	5	6	5	16	70	62	23	Total
Q3				90.0	82.1	74.3	70.7	Q3
Md	84.8	82.5	76.5	73.0	71.3	60.8	59.3	Md
Q1				60.0	61.5	52.3	44.3	Q1
Range	76-92	48-92	57-94	38-104	38-98	35-93	31-90	Range

TABLE XIII

DISTRIBUTIONS OF SCORES MADE ON ACHIEVEMENT TEST, LEVEL II, FORM D,  
BY SENIORS IN ACCOUNTING IN FIVE COLLEGES

Score	23	58	85	22	25	Score
100						100
98		1				98
96		1				96
94						94
92		2				92
90	1	1	1			90
88			1			88
86	1	3				86
84	2	1	1			84
82	1	1	1			82
80						80
78	3	3	1		1	78
76		3	2			76
74	1	2	1			74
72	1	4	3	1		72
70		1	2			70
68		2		1		68
66			4	1	2	66
64	1	4			2	64
62						62
60		1	1	1	1	60
58	1					58
56		1			2	56
54	2		3			54
52		3	2		2	52
50			3			50
48	1	2	1			48
46		1	1	1		46
44		2	2	1	1	44
42			2	1	1	42
40						40
38		1			3	38
36				1		36
34		5				34
32	1		1		1	32
30	1		1		1	30
28		1				28
26					1	26
24		1			2	24
22			1		1	22
20						20
18						18
16						16
14					1	14
12					1	12
10						10
8						8
6						6
4						4
2						2
0-1						0-1
Total	17	47	35	8	23	Total
Q3	83.5	78.8	73.5		60.5	Q3
Md	75.0	69.5	61.0	54.0	43.0	Md
Q1	55.3	48.8	49.5		27.5	Q1
Range	30-90	24-99	22-90	36-73	12-79	Range





## IV

### THE RELATIONSHIP OF ACCOUNTING TEST SCORES TO JOB PERFORMANCE IN THE FIELD OF PUBLIC ACCOUNTING

by  
Robert Jacobs

The College Accounting Testing Program has been in operation for some four and a half years. During this period many schools have undertaken local studies to determine the usefulness of the instruments employed in the plan of testing. For the benefit of those readers who are not familiar with the project, these instruments include the Orientation Test (a general aptitude test with items slanted toward the field of business), two levels of Achievement Tests in accounting, and a vocational interest questionnaire. The Orientation and Achievement Tests have been developed by the Committee on Selection of Personnel of the American Institute of Accountants. The interest questionnaire is the Strong Vocational Interest Blank, with norms adapted for use in this project.

The studies carried out locally by various schools and colleges have aimed principally at determining the relationship between scores on tests and grades received in accounting courses. Some of these studies have been carried on under the direction of the project office staff, while others, carried out independently, have been reported by the project office and in various publications. The most extensive summary of these data measuring the relationship between scores and grades was reported this fall to the 1950 Invitational Conference on Testing Problems sponsored by the Educational Testing Service. This report will be published in the proceedings of this conference, and reprints of the article will be available at the project office.

The need for studies which would go beyond the school situation and which might deal with actual success in accounting work rather than success in accounting study has been recognized by all persons and organizations connected with the project. In order to provide effective evaluation of the techniques, long-term studies are needed which will follow through the processes of initial screening of students, academic study, occupational placement, and progress through several years of employment. At least one such study is now being planned. However, it is expedient to get at the ultimate effectiveness of the tests in some manner without waiting for results which can be compiled only after several years of effort. This may be determined partly by studying the relationship of employed accountants' test scores to the ratings given such employees by their supervisors. It should be expected that, insofar as the tests measure qualities that condition success in accounting work, there should be some relationship between performance on the tests and performance on the job.

This article attempts to summarize the data of this type now in the research files of the project office.

One of the first of such studies was carried out in the early stages of the accounting personnel selection project. The experimental edition of Achievement Test, Level II, was administered to some 220 employees of a large New York public accounting firm. Before they took the tests these men were rated by their supervisors as being either technically qualified with good promise, technically

qualified with some promise, or technically qualified with little or no promise. When the mean percentile ratings of the men falling into each of these categories were compared at each level of work, a definite progression from lower to higher percentile rating was observed with increase in goodness of rating. The results of this study are shown in Table XIV.

It will be observed that the range of percentile marks indicates considerable overlap among the rated characterizations, indicating that there were a number of individual discrepancies between the two sets of data. When these discrepancies were studied it was found that many of them were due to the influence of personality factors in performing the ratings. It was found, for example, that there were several individuals in various categories whose technical knowledge was known to be high even before they obtained high scores on the Level II Achievement Test. Nonetheless, their ratings by supervisors were low because of personality weaknesses, such as inability to cooperate with fellow workers or inability to deal tactfully with clients. On the other hand, several of the individuals who secured mediocre ratings on the tests were known to have only a fair degree of technical competence, but had proved so valuable in creating client good will that they had received high ratings on the basis of a pleasing personality.

The results of such inquiry into the data serve to emphasize a very important point in studying the effectiveness of tests. A test which is designed to measure accounting achievement or technical knowledge will relate to success on the job to the extent that knowledge of accounting itself is a determinant of success. If other factors, such as good judgment, auditing sense, client appeal, ability to work with others, and so forth, are equally important factors, and if ratings of performance on the job are weighted with these other factors, it cannot be expected that near perfect correlations between scores on the test and ratings are to be found. A positive correlation of statistical significance will indicate that the factor measured by the test is operating to condition success to some extent. Discrepancies in either direction, however, may indicate that other factors of equal importance are operating rather than indicating that the test lacks validity. It is quite important that this point be kept in mind in interpreting all the data relating to test scores and performance on the job.

In 1949, a second firm reported to the project office the results of a study involving two separate groups of employees. One of these groups included ninety-two staff members tested with the Level II, Form A, Achievement Test in 1949. Test scores were compared with performance records as determined by the staff classification committee's ratings in the preceding April and subsequent personnel reports. The results of this appraisal were reported as follows:

<u>Number of Scores</u>	
6	Substantially higher than expected
5	Somewhat higher than expected
55	Approximately as expected
16	Somewhat lower than expected
10	Substantially lower than expected

In making this review, it was recognized that the Achievement Test is designed to measure technical knowledge and skill only and does not presume to measure personality, organizational ability, or such factors as tact, drive, and related personal qualities. These results were considered as generally favorable since only sixteen of the ninety-two scores varied substantially from the ratings.

The second group involved in the study reported by this firm included

TABLE XIV

MEANS AND RANGES OF PERCENTILE RATINGS MADE ON  
EXPERIMENTAL EDITION OF ACHIEVEMENT TEST, LEVEL II,  
BY VARIOUS GROUPS OF EMPLOYEES IN A LARGE PUBLIC ACCOUNTING FIRM

Group	Characterization	N	Percentile Ratings	
			Range	Mean
Senior	Technically qualified and good promise	3	84-100	91
Senior	Technically qualified and some promise	7	52-100	86
Senior	Technically qualified little or no promise	16	12-96	59
First Assistant	Technically qualified and good promise	11	46-99	79
First Assistant	Technically qualified and some promise	41	18-99	66
First Assistant	Technically qualified little or no promise	40	2-97	49
Second Assistant	Technically qualified and good promise	23	4-95	49
Second Assistant	Technically qualified and some promise	53	1-94	37
Second Assistant	Technically qualified little or no promise	26	1-49	15
		<u>220</u>		

forty-two staff members who had taken the Level II Achievement Test in the spring of 1947. The test performances of individuals in this group ranged as follows:

<u>Percentile Range</u>	<u>Number</u>
86-100	9
66-85	13
46-65	8
45-below	12
Total	<u>42</u>

Of the twenty-two men who received percentile ranks above 65 in 1947, seven had resigned or had been released by the time of the study late in 1949. Of the remaining fifteen still on the staff, eight had very good performance records while seven did not seem to measure up to their test scores. Of the twenty who received scores of 65 or below in 1947, twelve had resigned or had been released, and although the remaining eight were considered useful, none had an outstanding performance record.

On the basis of this study, this firm concluded that a high score in itself provides no assurance of success in public accounting but that a low score, in the absence of extenuating circumstances, raises a serious doubt as to the individual's future potentialities.

In the spring of 1950, an extensive staff testing program was sponsored by the Committee on Selection of Personnel. A total of 971 employed accountants and 175 firms participated in this program using Orientation Test, Form A, Achievement Test, Level II, Form C (Short), and the Strong Vocational Interest Blank. In connection with this testing, several firms were invited to participate in a validity study involving the relationship of the test scores to ratings of job performance. A rating scale was prepared consisting of eight job performance factors. Five rating categories were provided for each factor. Each of these categories was identified by descriptive phrases ranging from unsatisfactory to satisfactory qualities. The rating scale is shown in Figure 1.

The rating scale was scored quantitatively by means of a key or stencil on which numerical values were assigned to various positions along the scale. The midpoints of these values were arranged so that each of the five categories from lowest to highest was assigned a value of 1, 2, 3, 4, or 5.

A comprehensive study of the relationship of test scores to the various items and groups of items on this scale was carried out by the project office staff. The entire body of data is too extensive for reporting in this article. A summary of the median correlations obtained between scores on the Orientation and Achievement Tests and various items on the rating scale is shown in Table XV. This table shows also the median correlations and ranges of correlations by firms.

It will be seen that all the medians of the correlations for the various items are positive. They vary from rather low values to  $r$ 's that are fairly substantial. Correlations between the Achievement Test results and ratings are higher than those for the Orientation Test scores and ratings. When one considers the range of correlations it is observed that in many instances they extend from insignificantly negative correlations up to values that are quite high.

The figures near the bottom of the table showing the median correlations for the thirteen participating firms indicate that there are very wide differences among the firms. Apparently the results of the tests do not line up well at all

### RATING SCALE FOR EMPLOYED ACCOUNTANTS

This rating form shows eight qualities on which to rate each employee. The first four relate to knowledge and ability; items 5-8 concern personality; the last item is an overall rating. Please rate each quality as independently as possible. It is suggested that each one in the group be rated on Item #1, then each rated on quality #2, and so forth. Rate each individual by making a check (✓) at that point on each scale where in your judgment he stands. The average or typical employee should be rated at or near the center of the scale. *Please do not attempt to rate a staff member unless you have adequate knowledge on which to base your rating.*

EMPLOYEE _____
CLASSIFICATION _____
DATE OF RATING _____

	Unsatisfactory amount	Rather slow	Completes regular work in reasonable time	More than average amount of work	Completes a very large amount of work
1. Quantity of work	Unsatisfactory performance	Sometimes inaccurate	Average level of accuracy	Above average accuracy	Work is of exceptional quality
2. Quality of work	Does not understand his work	Fair understanding only	Displays satisfactory knowledge of field	Above average knowledge of accounting	Displays expert knowledge
3. Knowledge of accounting	Unable to learn	Learns slowly	Shows average ability in learning new jobs	Above average ability in learning new jobs	Learns at exceptionally fast rate
4. Ability to learn	Needs watching	Sometimes unreliable if he thinks he can "get by"	Honest and dependable. Works with supervision	Very dependable - works with only occasional supervision	Highly dependable. No supervision required.
5. Dependability and integrity	Lazy, needs prodding	Indifferent	Does ordinary assignments of own accord	Industrious and energetic	Does more than is expected
6. Initiative and responsibility	Inclined to make trouble	Gives limited cooperation	Usually cooperates willingly	Above average cooperation - well liked	Cooperates cheerfully - inspires others
7. Cooperation - ability to get along with others	Low	Below average	Will be an average employee	Above average - may be promotional material	Superior - definite promotional material
8. Overall value to the organization					

COMMENTS:

SIGNATURE OF RATER \_\_\_\_\_

Figure 1

TABLE XV

MEDIANS AND RANGES OF CORRELATIONS OBTAINED BETWEEN ACCOUNTING TESTS  
AND RATINGS IN THIRTEEN PUBLIC ACCOUNTING FIRMS PARTICIPATING IN  
COUNTRY-WIDE STAFF TESTING PROGRAM, APRIL, 1950

Median Correlations and Ranges of Correlations by Items			
Item	Median <u>r</u>	Range of <u>r</u> 's	
Orientation Test Verbal vs.			
Rating Item No. 3	.403	-.045 - .642	
Rating Item No. 4	.385	-.021 - .729	
Rating Item Nos. 1-4	.282	.084 - .700	
Rating Item No. 8	.217	-.217 - .727	
Rating Item Nos. 1-7	.289	-.031 - .690	
Orientation Test Quantitative vs.			
Rating Item No. 3	.408	-.065 - .709	
Rating Item No. 4	.353	.115 - .851	
Rating Item Nos. 1-4	.381	0 - .791	
Rating Item No. 8	.366	-.014 - .805	
Rating Items Nos. 1-7	.340	.014 - .781	
Orientation Test Total vs.			
Rating Item No. 3	.453	0 - .679	
Rating Item No. 4	.361	-.058 - .791	
Rating Item Nos. 1-4	.403	.091 - .749	
Rating Item No. 8	.333	-.118 - .791	
Rating Item Nos. 1-7	.295	-.003 - .739	
Achievement Test vs.			
Rating Item No. 3	.578	.164 - .751	
Rating Item No. 4	.504	.052 - .799	
Rating Item Nos. 1-4	.559	.123 - .758	
Rating Item No. 8	.482	-.111 - .828	
Rating Items Nos. 1-7	.546	-.036 - .763	
Median Correlations and Ranges of Correlations by Firms			
Firm	N	Median <u>r</u>	Range of <u>r</u> 's
1	12	.501	-.065 - .658
2	13	.736	.591 - .851
3	18	.437	.069 - .647
*4	21	.517	.278 - .635
5	28	.185	-.045 - .472
*6	18	.226	-.043 - .641
*7	9	.365	.110 - .658
*8	33	.262	.132 - .372
9	15	.547	-.111 - .696
10	17	.347	.133 - .649
11	20	.229	-.015 - .653
*12	19	.603	.476 - .791
13	16	.280	-.217 - .751

\*Firms having report of results before submitting ratings.



with ratings in firms 5, 6, and 11, whereas in the case of firms 2, 9, and 12 there is good agreement. In fact, in the case of firm 2 the correlation between the test scores and ratings is higher than the correlations between two separate ratings would be expected to be. It will be noted that some firms received a report of test results before ratings were submitted. Although all participants were requested to make the ratings independently of test scores, contamination of the criterion was possible in the five starred firms.

The significance of these data is limited by two factors. These are (1) small size of the groups studied and (2) variation in interpretation of rating scale items and descriptions among raters. With regard to the first item, the size of the employed groups in the participating firms ranged from 9 to 33, with a median N of 18. It is difficult to assume representativeness of sampling with groups of such size. Concerning the second item, it was not possible to provide over-all guidance in performing the ratings so that similar emphases and similar interpretations were employed in applying the scale. Hence, one is limited in making comparisons of correlations from firm to firm.

A study just completed at the project office avoids these two limitations. This study is based on more than 200 employees in a single firm, the men taking the tests having been drawn from branch offices of the firm scattered throughout the country. The rating scale employed was one developed by the firm for its own use. Instruction and training in the use of the scale is provided by the central office of the firm. This rating scale, called the "Employee Progress Report," is shown in Figure 2.

It will be seen that four descriptive categories are provided for each of five factors relating to the accountant's work. Numerical values are indicated along the scale so that a quantitative score can be assigned to the rating. In this firm the ratings are performed by a procedure of consensus judgment; that is, in rating a man supervisors and managers who are acquainted with the work of a particular staff group meet as a committee to discuss each employee's characteristic work habits and to assign a rating on the basis of a group decision.

Each of the employees in this firm took the entire battery of tests. The short form of the Level II Achievement Test was employed in most instances, although the four-hour test was administered to employees in two or three offices. Test scores and ratings were supplied the project office for the purpose of research. All aspects of this study are not completed, but the following data can be reported.

Correlations obtained between scores on the Orientation Test and the Level II Achievement Test, Short Form C, and ratings of "On the Job Performance" and "Capacity for Future Growth" are shown in Table XVI.

TABLE XVI

CORRELATIONS BETWEEN ACCOUNTING TEST SCORES AND RATINGS OF  
ON THE JOB PERFORMANCE AND CAPACITY FOR FUTURE GROWTH IN A PUBLIC ACCOUNTING FIRM

Test	On the Job Performance (N = 228)		Future Growth (N = 227)	
	r	P.E.	r	P.E.
Orientation Verbal	.243	± .042	.342	± .039
Orientation Quantitative	.254	± .041	.294	± .041
Orientation Total	.256	± .041,	.352	± .039
Achievement II-C	.337	± .040	.409	± .037

Name \_\_\_\_\_ Date of Service \_\_\_\_\_

	<u>Assistant</u>		<u>Senior</u>			<u>Other</u>
	<u>Junior</u>	<u>Semi-Senior</u>	<u>Light</u>	<u>Medium</u>	<u>Heavy</u>	<u>Designate</u>

What level of work did this employee perform as the basis for your rating?

1. Technical Knowledge. (Its adequacy for level of work indicated above.)	60 . . . . .	70 . . . . .	80 . . . . .	90 . . . . .	100
	Deficient in working knowledge of fundamentals.	Needs more basic information to become productive.	Has sufficient knowledge to do good work.	Excellently prepared for duties.	
2. On-the-Job Performance	60 . . . . .	70 . . . . .	80 . . . . .	90 . . . . .	100
	Unsatisfactory	Occasionally satisfactory.	Quite consistently satisfactory.	High grade performance at all times.	
3. Capacity for Future Growth (Leadership)	60 . . . . .	70 . . . . .	80 . . . . .	90 . . . . .	100
	Lacks qualifications to make headway.	Ability limited to intermediate assignments.	Is able to handle increasingly responsible assignments.	Should progress to high level of responsibility.	
4. Ability to Write Reports, Notes to Financial Statements, etc. (If Applicable)	60 . . . . .	70 . . . . .	80 . . . . .	90 . . . . .	100
	Incapable of original reporting. careless with facts.	Can follow previous routine reports. Original work not good.	Fair, but requires editing.	English and presentation good; facts carefully stated.	
5. Development of Assistants. (If Applicable)	60 . . . . .	70 . . . . .	80 . . . . .	90 . . . . .	100
	Lacks ability to instruct less experienced men.	Sometimes does not get assistants to understand what is expected of them.	Generally successful in transmitting knowledge to assistants.	Does excellent job of training assistants.	

If you were discussing his ratings with this employee, what would you consider the most constructive thing to tell him with respect to his performance and preparation for future responsibility? (BE SURE TO ANSWER THIS QUESTION)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date \_\_\_\_\_

Signed \_\_\_\_\_

Figure 2

It will be observed that there is successive increase in percentile rank of the median test performance of low, middle, and high groups respectively. It is interesting to see that the percentile rank assigned to the median scores of the middle group are quite close to the fiftieth percentile or the norm median.

Actually, the discrimination between the sub-groupings provided by the test scores is not as good as one might suppose on the basis of these data. Scores range rather widely on either side of the median so that there is considerable overlap among the three groups. For example, the distribution of Achievement Test, Level II-C scores for the three sub-groups described in the preceding table are as follows:

<u>Score</u>	<u>Low</u>	<u>Middle</u>	<u>Top</u>
52		1	
48			3
44		6	4
40	7	5	14
36	6	17	13
32	7	17	9
28	6	18	5
24	6	20	7
20	12	17	3
16	4	3	5
12	6	2	
8	2		
4	2		
0	1		
	<u>59</u>	<u>106</u>	<u>63</u>

The distributions reveal that the highest test score was obtained by a man whose rating placed him in the intermediate category with respect to capacity for future growth. In the low rated groups some men are found with scores higher than the median or average for the top rated group, while some of the men in the top rating group have test scores which are notably below the median or average for the low group. The overlapping of the distributions prevents application of any critical score which would eliminate a majority of the low group without eliminating at the same time a substantial portion of the men rated high with regard to capacity for future growth. Nonetheless, it is apparent that the test is measuring a factor which tends to differentiate the high and the low rated men, and there is sufficient evidence to warrant attention to test results among other data in considering capacity for future growth in this particular firm.

The item "Ability to Write Reports," shown in the progress report illustrated in Figure 2, applies to some 114 employees taking the battery of accounting tests. One correlation with this rating factor which may be of interest can be reported at this time. This is the  $r$  obtained in studying the relationship of the Orientation Test verbal score to this particular rating item:

<u>Variables</u>	<u>N</u>	<u>r</u>	<u>P.E.</u>
Orientation Verbal vs. Ability to Write Reports	114	.550	.044

The relationship between the verbal score on the Orientation Test and ratings for the report writing item in the progress report is more substantial than any of the other correlations reported from this study. This relationship will bear further investigation. If it is borne out in supplementary studies, an additional use of Orientation Test results is suggested in counseling students regarding the possibilities of success in the field of accounting.

It will be observed that all of these correlations are positive and that all are more than four times the probable error, the usual criterion of statistical significance. As with the data reported in Table XV, correlations for the Achievement Test are higher than the Orientation Test relationships with ratings. It is apparent, also, that the test results agree somewhat better with ratings for the factor, capacity for future growth, than with ratings of on the job performance.

In order to illustrate these relationships in somewhat more meaningful terms, the total group was divided into a high, a middle, and a low sub-grouping on the basis of the ratings for "on the job performance." The median test scores were computed for each group. Table XVII shows the percentile ratings corresponding to the median scores for Achievement Test, Level II-C and total Orientation Test score. Percentiles are taken from employed accountant norms. The ratings for "capacity for future growth" are illustrated in similar fashion in Table XVIII.

TABLE XVII

PERCENTILE MARKS CORRESPONDING TO MEDIAN SCORES ON ACCOUNTING TESTS  
OBTAINED BY HIGH, LOW, AND MIDDLE GROUPINGS OF 228 ACCOUNTANTS  
RATED WITH RESPECT TO ON THE JOB PERFORMANCE

Division of Rated Group	Percentile Corresponding to Median Score	
	Level II-C	Orientation Total
High N = 63	76	64
Middle N = 92	49	53
Low N = 70	43	37

TABLE XVIII

PERCENTILE MARKS CORRESPONDING TO MEDIAN SCORES ON ACCOUNTING TESTS  
OBTAINED BY HIGH, LOW, AND MIDDLE GROUPINGS ON 227 ACCOUNTANTS  
RATED WITH RESPECT TO CAPACITY FOR FUTURE GROWTH

Division of Rated Group	Percentile Corresponding to Median Score	
	Level II-C	Orientation Total
High N = 63	76	64
Middle N = 106	55	49
Low N = 59	34	31

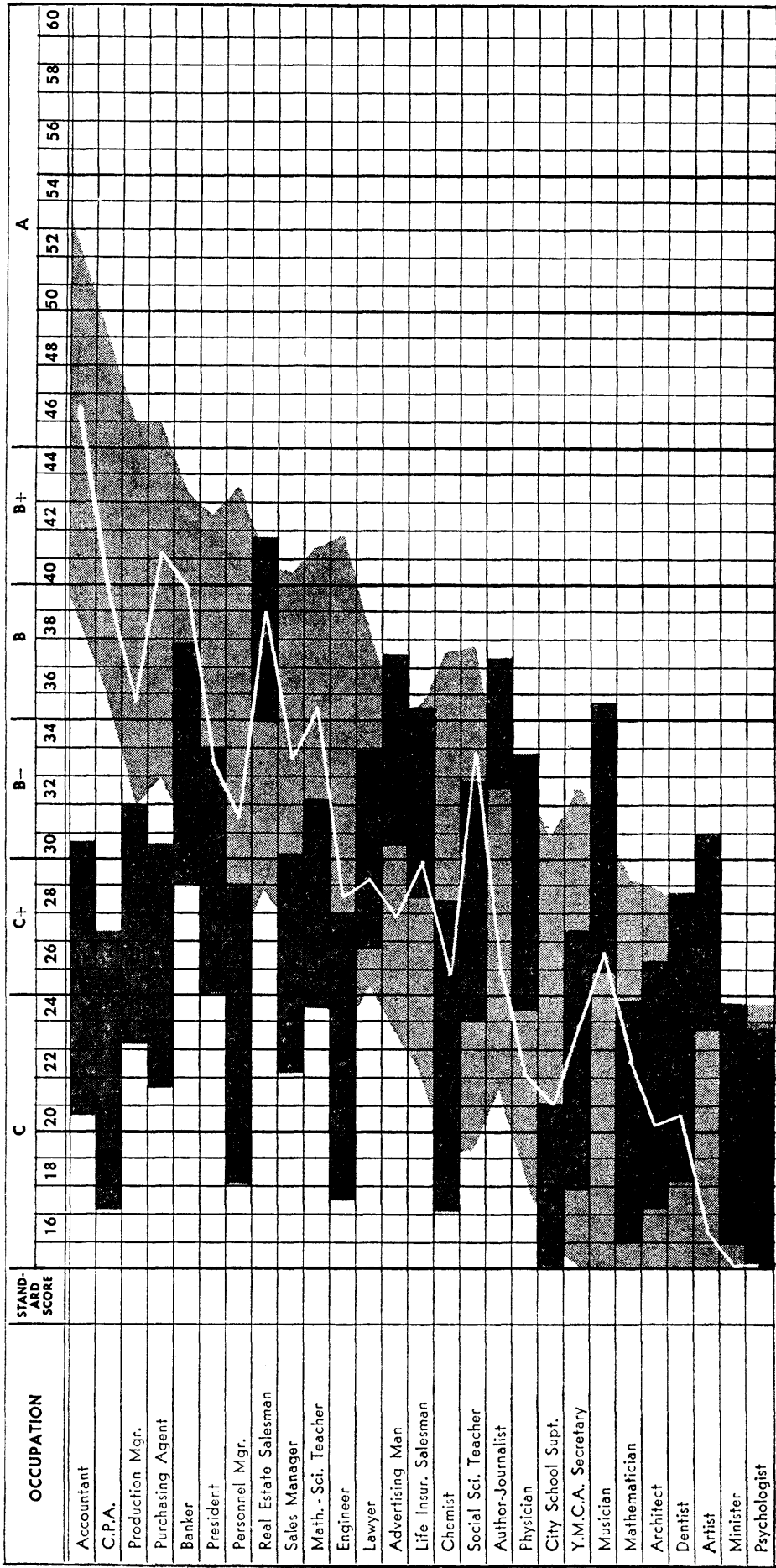
No data have been reported in this article with regard to the Strong Vocational Interest Blank in the employment situation. Studies of the relationship between scores on the interest test and ratings on the scale shown in Figure 2 are now in progress and will be reported at a later time. One aspect of the validity study carried out in connection with the April staff testing program was aimed toward checking stability of the "norm" pattern of interests established for employed public accountants in the early part of the project. A sampling of the interest test papers submitted by employed accountants during this testing period was used as a basis of computing median scores for each of the twenty-seven scales now reported by the project office. The sampling of papers used included 218 of 717 Strong blanks submitted during the staff testing period. This number amounted to 30.4 per cent of the total. The resulting profile is shown in Figure 3, superimposed upon the norm pathway appearing on the project office Strong report form. It will be recalled that the boundaries of this "pathway" mark the range of the middle 50 per cent of the scores obtained by 1,000 employed accountants on each of the twenty-seven scales.

General agreement with the original norms is quite evident. The median scores for the scales of production manager, personnel manager, and engineer appear to be somewhat lower than those obtained from the initial norm group, while the median profile points at the scales of musician, social science teacher, and real estate salesman are somewhat higher. However, the highest scores and the lowest scores occur in the same occupations as those established in these respective positions in the original research, and the results tend to confirm the stability of the general pattern of interests established several years ago for the accounting profession.

The data reported in this article are by no means conclusive. Actually, not much could be generalized beyond the local situations in which the scores and ratings were analyzed. Perhaps two conclusions can be drawn:

1. Correlations between scores on the accounting tests and ratings of job performance are generally positive, and, although not high, are usually of statistical significance. This indicates definitely that some of the factors conditioning success in accounting work are identified by the results of the tests.
2. Discrepancies between test scores and job ratings are frequent enough to indicate that employment or promotion decisions cannot be made accurately entirely on the basis of test results.

These two conclusions tend to support the testing program as a valuable aid in evaluating prospective or present employees. Other types of data are required to evaluate factors not measured by the accounting tests, but when these are combined with test scores and are balanced against each other areas of potential strength and weakness become evident and the possibilities of growth and development in the accounting field are assessed with considerable improvement over change guess.



Your occupational interest ratings are recorded under the heading "Standard Score" and opposite the appropriate occupations. Standard scores of 45 and above are rated A, meaning that one has interests characteristic of men successfully engaged in the occupation. Ratings of B+, B, and B- also indicate possession of the interests characterizing men in those occupations, but, at the same time, they represent less and less assurance that the classification is correct. About 15 per cent of men known to be successful in a given occupation rate B+; about 9 per cent rate B; about 4 per cent B-; and a few rate A in occupations other than the one in which they are engaged. The farther the "X" falls to the right of the heavy shaded area for a particular occupation, the greater the certainty that one has the interests characteristic of that occupation. The farther the "X" lies to the left of this shaded area, the greater the certainty that one does not have the interests of the occupation. The scores falling within the heavy shaded area are indeterminate; they help sometimes to show, along with other scores, the general trend of one's interests in an occupational group, but generally they can be ignored.

The light shaded area extending diagonally across the page marks the general trend of interest ratings found for one thousand public accountants (200 partners, 200 managers, 200 seniors, 200 semi-seniors, 200 juniors). This area shows the range of the middle 50 per cent of the scores on each scale for this group. Thus, for the scale of accountant the ratings of 50 per cent of the one thousand public accountants fall between the scores of 39.8 and 53.2; for the scale of C.P.A. between 35.6 and 49.1, and so forth. On the whole, it is desirable for one who is considering accountancy as a profession to have scores which follow the general trend of this light shaded area to the extent that ratings for occupations listed at the top of the chart are relatively high, while the lower ratings occur for scales appearing at the bottom of the list.

Men's interests change very little from twenty-five to fifty-five years of age. They change somewhat from twenty to twenty-five years of age, and much more so from fifteen to twenty years. Consequently, the younger the man, particularly below twenty years of age, the less certain can his interests be identified in terms of some occupation.

The ratings from this test should not be viewed as conclusive. Instead, they should be considered in the light of all other information bearing upon one's vocational choice. Occupations rated A and B+ should be carefully considered before definitely deciding against them; occupations rated C, C+, and B- should be carefully considered before definitely deciding to enter them. Remember that ratings for only a few from among all the hundreds of occupations are reported here.

Figure 3. Profile of median scores on 27 Strong occupational scales obtained by 218 employed accountants tested in April, 1950.