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## Analysis of the Education and Experience of 3,341 Candidates Taking the May, 1950 CPA Examination and Cumulative Analysis of Three Examinations

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American Institute of Accountants. Board of Examiners

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ANALYSIS OF THE EDUCATION AND EXPERIENCE OF 3,341 CANDIDATES TAKING THE MAY, 1950 CPA EXAMINATION AND CUMULATIVE ANALYSIS OF THREE EXAMINATIONS

Prepared for the Board of Examiners of the American Institute of Accountants

March 1951 Robert L. Kane, Jr.

### ANALYSIS OF THE EDUCATION AND EXPERIENCE OF CANDIDATES TAKING THE CPA EXAMINATION

This is the fifth study of the effects of education and experience on the success of candidates taking the CPA examination. This analysis is based on statistics for candidates taking the examination in 1949 and May 1950.

The four previous studies explored the results of the examinations given in November 1946, November 1948, May 1949 and November 1949.

Two separate and distinct samples are involved for each of the examinations. The May 1950 samples consisted of 590 candidates who, according to their state boards, qualified for the CPA certificate as a result of the May 1950 examination. These will be referred to as successful candidates. The other May 1950 sample includes 2,751 candidates who failed to qualify in that examination even though they may have passed some subjects. These will be referred to as unsuccessful candidates.

These data do not cover all the states using the examination, nor do they necessarily include all of the successful or unsuccessful candidates within a particular state, since all data sheets which were incomplete in any respect were excluded. Therefore, a direct comparison of the number of successful candidates with those who were unsuccessful is not valid as a measure of percentage of candidates passing. However, the relationship of various subgroups to group totals should be valid and significant as measures of differences between the successful and unsuccessful candidates.

The classifications used in the present study are identical with those used in the two 1949 analyses, but differ from those used in the prior studies. Therefore, it is possible to consolidate the results for the last three studies. This combination should serve to reduce the possibility of serious errors resulting from some of the problems encountered in using samples.

The candidates have been classified into seven groups according to their basic education. Coaching courses or review courses have not been considered. Candidates whose basic education beyond high school has been through attendance at "business colleges" or other non-degree schools and those whose education has been through correspondence courses have been combined into a group identified as Technical Accounting School. There is reason to believe that some candidates in the College Incomplete group were seniors who had not quite graduated at the date of the examination. These candidates could be more appropriately classified as graduates.

Experience classifications fail to reflect private accounting experience when it is combined with public accounting experience. Otherwise, the experience classification should not present any difficulty in interpretation.

Schedules I-a and I-b present the data for May 1950 candidates classified as to education and experience. When these data are compared with data for 1949, we find a relative increase in the percentage of college graduates to the total of the samples, offset principally by decreases in the number who had only a high school education and in the number who had only a technical school education. The percentages of candidates in each educational group were as follows:

	Perc	ent of Total Sa	mple
Education	May 1949	November 1949	<u>May 1950</u>
High School:			
Successful	3.4	1.4	.8
Unsuccessful	4.6	4.5	3.3
College Incomplete:			
Successful	15.2	12.9	12.5
Unsuccessful	18.6	13.6	16.7
Technical Accounting School:			
Successful	12.0	10.3	7.0
Unsuccessful	15.7	16.9	10.9
College Incomplete and Technical School:			
Successful	5.5	8.0	7.0
Unsuccessful	6.9	10.8	8.4
College Graduate:			
Successful	63.9	67.4	72.7
Unsuccessful	54.2	54.2	60.7

This summary permits the comparison of the success of different groups. The college graduate groups on all three examinations accounted for a larger percent of

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successful candidates than of the unsuccessful candidates. The college graduates have consistently provided more than their proportionate share of the successes. By far the worst performance has been turned in by those candidates having only a high school education and their performance became progressively poorer. In May 1950 they contributed only one-fourth as large a percentage of successful candidates as they represented of the total number of candidates. The next poorest performance was by candidates who attended technical accounting school. This group appears to be decreasing slightly in size but is still not an extremely small group.

When the experience of the candidates taking the examination in May and November 1949 is compared with that of the May 1950 candidates, there is no noticeable trend. The number of candidates taking the examination without accounting experience appears to be higher in May each year than in November. In May 1949 the inexperienced candidates made up 8.9% of the successful and 15.8% of the unsuccessful candidate totals. These percentages were down to 2.3 and 6.6 in November 1949 but back up to 10.5 and 13.5 in May 1950. The May increase is probably due to college seniors without experience taking the May examination in those states where they are allowed to do so.

All three studies show that candidates having up to four years of public accounting experience achieve a greater degree of success than they represent of the total number of candidates. In May 1949 they constituted 58.7% of all successful candidates but were only 40% of the unsuccessful total. In November 1949 they accounted for 58.5% of successes and only 49% of the unsuccessful total, while in May 1950 they were 55.3% of the successful total and only 40.8% of the unsuccessful total.

Schedules II-a and II-b present the basic data for the two 1949 studies combined with the May 1950 study. In Schedule II-a the number of successful

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candidates has been computed as a percentage of unsuccessful candidates. Because of the nature of the samples there is no significance to the absolute percent of successful to unsuccessful candidates, but the percentages are valuable for comparison of different education and experience groups. To facilitate such comparison, the variation of each percentage from the percent for the total (24.5) is given in Schedule II-b. Candidates who had completed graduate school were the only ones who had a favorable variation for all classes of experience. The High School and Technical Accounting School groups had unfavorable results for all classes of experience. Those candidates with less than two years of public accounting and those with from two to four years of public accounting were the only ones of the experience groupings to show above average performance. In view of the size of the two groups included in Schedule II, a considerable amount of the irregularities found in the smaller samples should have been eliminated and it is probable that the results are more reliable than for any one of the studies considered alone.

Schedules III-a and III-b show statistics for the three examinations classified as to the number of attempts made at the examination. About 23% of the successful candidates passed on their first attempt. A total of 74.7% of those passing were successful on one of their first three attempts, with the second attempt producing the best percentage results. Schedule III-b shows that 42.7% of the unsuccessful candidates were taking the examination for the first time. In May 1949 the percentage of first-time unsuccessful candidates was 51; in November 1949 it was 38.8 and in May 1950 it was 39.7. Since there was a rapid increase in the total number of candidates prior to 1950 and some decrease after November 1949, it is probable that the percentage of candidates who are making their first attempt will not go back up to the May 1949 level.

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There was a total of 2,547 first-time candidates included in the three studies. Of this number 1,493 or 58.6% were college graduates. That is about the same percentage as graduates represent of all the candidates studied.

Page 2 of Schedule III-b presents the data for unsuccessful candidates classified as to experience and number of attempts at the examination. While there is a decrease in the percentage of first-time candidates as we move into the more experienced groups, there are a number of candidates who do not attempt the examination until they have had four or more years of experience, and there are also a number who continue to take the examination repeatedly even though they are not in either private accounting or public accounting.

Schedules IV-a and IV-b present an analysis of the 2,547 candidates taking the examination for the first time on one of the three examinations. It is significant that 73.3% of the successful first-time candidates were college graduates while only 56.7% of the unsuccessful first-time candidates were graduates. It is evident that experience in public accounting was a significant factor in success for these first-time candidates. This is apparent from the fact that for both graduates and for non-graduates those having up to four years of public accounting experience made up a higher percentage of the successful candidate total than of the unsuccessful total.

Of the 2,248 unsuccessful first-time candidates, only 1,274 or about 57% were college graduates and of this group only 340, or about 15% of the total, had two years or more of public experience. To the extent that these samples are representative, they establish that a college degree and at least two years of experience in public accounting provide an optimum background for passing the CPA examination on the first trial. However, it appears that candidates who have completed graduate school or who have completed an accounting major program as undergraduates achieve considerable success with less experience.

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Schedule V presents a comparison over three examinations of success on the examination, by subjects, for each of the education and experience groups used in the study. While the prior schedules did not differentiate between unsuccessful candidates who passed one or more subjects and those who did not qualify in any subject, this schedule does take into account partial success of candidates. That is, it is based on all candidates who have passed any of the four subjects whether they passed the other three or not. The total number credited with having passed each subject at the completion of each examination was first determined. These candidates were tabulated as to education and as to experience. Each group was then expressed as a percentage of the total in order to facilitate comparison of various examination results. The percentages of each class to the total of the two samples for each of the three examinations has been included for comparative purposes. Study of these results shows that the conclusions made as to complete success, i.e., passing all four subjects, are also true for partial success. For instance it is seen that high school graduates made up a smaller percent of those candidates passing each subject than they represented of the total number of candidates in the studies. We could restate these data as follows:

	<u>May 1949</u>	November 1949	<u>May 1950</u>
Percent high school graduates were of total number of candidates	4.3	3.7	2.9
Percent high school graduates were of total number passing:			
Auditing	3.7	2.9	2.1
Commercial Law	3.8	2.8	2.1
Theory of Accounts	3.6	2.8	1.4
Accounting Practice	3.7	2.8	1.8

A similar comparison for each educational classification shows technical accounting school graduates also to have always been low in the percentage they contributed to passes in each of the subjects, whereas candidates who had completed graduate school were uniformly high.

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The comparative figures classified according to experience show that candidates who have had experience in public accounting obtain better examination results than those having no experience or than those with non-public experience. Only in Commercial Law is public experience of questionable value. Public experience is of the most value in Auditing but also is decidedly helpful in Accounting Practice and in Theory of Accounts.

Before suggesting the general conclusions that may be drawn from the study, certain limitations should be pointed out.

All of the studies referred to have been based on data from only about one-half of the states and have not included more than a small percent of the total number of candidates. It is possible that the states which have supplied the data used in these studies may not be representative of the national situation. New York has not been included in any of the studies and, since New York requires that candidates be college graduates, the studies understate the percentage of candidates who are college graduates if we consider the entire number of candidates taking the examinations. Even for those states submitting data, it was not possible to include all candidates. In a number of instances, tabulation has shown that a part of the desired data was lacking, and as a result the candidate could not be included. Other data have been deleted because of apparent inaccuracies.

Apart from the sampling problem, there are numerous factors which probably have significant effects on a candidate's success or failure that have been ignored for purposes of these studies. Natural aptitude for accounting may be a more important factor than education, but that factor could not be considered. There are possible variations in the quality of experience that might exist as between different groups, and there are variations in the quality of education, neither of which has been considered in the scheduled data. However, by utilizing the same data, some limited studies have been made of differences in examination results

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achieved by graduates of individual colleges. These studies are presented here as an appendix. From the data it appears to be clear that there are large differences in quality of education.

Subject to these limitations, the following general conclusions can be drawn from the studies that have been made:

1. Experience in public accounting up to a total of four years increases the candidate's chance of passing the CPA examination. This experience seems to be of greatest benefit in Auditing but of practically no benefit in Commercial Law.

2. An increased amount of education in general enhances the candidate's chance of success in the examination. This applies generally to those in each experience group.

3. A combination of a college degree and at least some experience in public accounting appears to be a very effective background for candidates taking the examination. Candidates who have completed courses in graduate schools have performed much better than those who have taken only undergraduate degrees.

4. Most candidates who qualify for the CPA certificate succeed in passing all subjects on one of their first three attempts. The second attempt produces the highest number of successful candidates.

5. It appears that an increasing percentage of the candidates have completed a college course of study. However, these graduates benefit substantially by obtaining public accounting experience even though they may require less of such experience to pass the examination than is needed by non-graduates.

6. Available evidence indicates that even among the larger and better known schools there are many schools whose graduates do not do well on the examination.

While no study of the November 1950 results is planned, information will be collected as to the May 1951 results.

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SCHEDULE I-a.

## NUMBER OF SUCCESSFUL AND UNSUCCESSFUL CANDIDATES CLASSIFIED AS TO EDUCATION AND EXPERIENCE

# (SAMPLES FROM MAY, 1950 EXAMINATION)

				EXPEF	LENCE		
					Ρ	BLIC	
EDUCATION	Total	N <b>o</b> Experience	Non- Public	Less Than 2 yrs.	2-4 yrs.	4-6 yrs.	Over 6 yrs.
<u>High School</u> Successful candidates Unsuccessful candidates	5 92	0 1	00	0 1	0 17	1 18	40 4 4
College Incomplete Successful candidates Unsuccessful candidates	74 459	15 133	11 69	14 51	10 71	11 67	13 68
Technical Accounting School Successful candidates Unsuccessful candidates	41 299	2 19	8 50	39 8 39	6 55	58 8	9 78
College Incomplete and Technical School Successful candidates Unsuccessful candidates	41 230	00	1 35	13 25	10 39	54 54	689
College Graduate (See Breakdown) Successful candidates Unsuccessful candidates	429 1 <b>,</b> 671	45 210	65 303	156 425	109 399	29 203	25 131
Total Candidates Successful candidates Unsuccessful candidates	590 2 <b>,</b> 751	62 372	85 466	191 541	135 581	57 400	60 391
		B	AIL OF CO	LLEGE GRADU	JATE GROUP		
Not Accounting Major Successful candidates Unsuccessful candidates	47 248	4 15	4 37	30 8	15 82	54.5	30
Accounting Major Successful candidates Unsuccessful candidates	324 1,288	38 190	50 240	123 355	85 287	19 136	9 0 0
Graduate School Successful candidates Unsuccessful candidates	58 135	ωſν	11 26	25 140	6 OE	13	57

# PERCENTAGE ANALYSIS OF SUCCESSFUL AND UNSUCCESSFUL CANDIDATES CLASSIFIED AS TO EDUCATION AND EXPERIENCE

# (SAMPLES FROM MAY, 1950 EXAMINATION)

Total Unsuccessful Candidates	College Incomplete and Technical School College Graduate	College Incomplete Technical Accounting School	High School Only			Total Successful Candidates	College Graduate	College Incomplete and Technical School	Technical Accounting School	College Incomplete	High School Only		EDUCATION			
100.0	60.7	16.7 10.9	ω ů			100.0	72.7	7.0	7.0	12.5	•8		Total Sample	Per cent of	Group as	
13.5	3.9 12.6	29.0 6.4	1.1			10.5	10.5	8	6*h	20.2	1 1		Experience	No		
16.9	15.2 18.1	15.0 16.7	9.8	UNSUCCESS		ካ - ካ [	15.1	2.4	19.5	14.9	1	SUCCESSI	Public	Non-		
19.7	10.9 25.4	11.1 13.0	1.1	SFUL CANDID	· · · ·	4,32	36.4	31.7	19.5	18.9	;	UL CANDIDA	2 yrs.	Less Than		EXPERIEN
21.1	17.0 23.9	15.5 18.4	18° <sub>1</sub> 4	ATES		22.9	25.4	24.4	14.6	13.5	ł	TES	2-4 yrs		PUBLI	CE
14.6	23.5 12.2	14.6 19.4	9.6t			9,6	6.8	19.5	19,5	14.9	20.0		4-6 yrs.		G	
14.2	29.5 7.8	14.8 26.1	50.0			10,2	5.8	22.0	22.0	17.6	80.0		6 yrs.	Over		
100.0	100.0	100.0	100.0			100,0	100.0	100.0	100,0	100.0	100.0		Total			

## NUMBER OF SUCCESSFUL AND UNSUCCESSFUL CANDIDATES CLASSIFIED AS TO EDUCATION AND EXPERIENCE (MAY, 1949, NOVEMBER 1949, AND MAY 1950 SAMPLES)

Graduate School Accounting Major Not Accounting Major Total Candidates College Graduate (See Breakdown) College Incomplete and Technical School Technical Accounting School College Incomplete High School Successful candidates Successful candidates Percent of successful to unsuccessful Percent of successful to unsuccessful Unsuccessful candidates Percent of successful to unsuccessful Unsuccessful candidates Percent of successful to unsuccessful Unsuccessful candidates Successful candidates Percent of successful to unsuccessful Unsuccessful candidates Successful candidates Percent of successful to unsuccessful Unsuccessful candidates Successful candidates Percent of successful to unsuccessful Unsuccessful candidates Successful candidates Percent of successful to unsuccessful Unsuccessful candidates Successful candidates Percent of successful to unsuccessful Unsuccessful candidates Successful candidates Successful candidates Unsuccessful candidates EDUCATION 888 3,034 29.3 615 2,145 28.7 1,289 5,266 24.5 Total 138 236 58.5 135 653 20.7 172 874 19.7 88 1445 19**.**8 119 707 16.8 206 10,7 Experience 101 672 15.0 71 398 17.8 26 211 12.3 305 19.0 6 80 7-5 16.3 7 13 53.8 No 28 0 N O DETAIL OF COLLEGE GRADUATE GROUD 22 133 16.5 191 966 198 134 577 23.2 Public Non-31 166 18.7 397 22.7 128 128 12 82 14,6 46.8 13°4 13°4 359 1,049 34.2 Less Than 2 yrs. 212 606 35.0 24 110 21.8 34 109 31,2 293 792 37.0 57 76 75.0 12°2 46.3 1.6 11 EXPERIENCE 377 1,174 32.1 2-4 yrs. 48 177 27.1 272 711 38.3 39 170 22.9 197 486 40•5 36 150 24.0 5623 20 9**8** 20,4 10 45 22,2 PUBLIC 4-6 yrs. 22 104 21.2 73 335 21.8 19 100 19°0 29 136 21.3 145 727 19.9 38 217 17.5 3°2 3°2 8 17 97 17, 21 85.7 18 Over 6 yrs. 45 221 20.4 17 108 15.7 27 152 17.8 20 134 14°3 20 114 17.5 116 678 83 8.4 7 31 22.6 18 56 32.1 17.1

DEVIATIONS OF THE PERCENTAGES OF SUCCESSFUL TO UNSUCCESSFUL CANDIDATES IN EACH GROUP FROM THE AVERAGE OF ALL CANDIDATES

(MAY 1949, NOVEMBER 1949, AND MAY 1950 SAMPLES)

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				EXPER	LEINCE		
					PU	BLIC	
	 #	No	Non-	Less Than	-	-	
ETOCAT TOM	Total	Hxperience	Public	2 yrs.	2-4 yrs.	4-b yrs.	Over b yrs.
High School Only	<b>-</b> 13.8	- 24.5	- 9.1	- 15.4	۲ 2·3	- 20.7	- 16.1
College Incomplete	<b>-</b> 4.8	- 12.2	<b>،</b> ۶.8	+ 6.7	- 1.6	၊ ယ ယ	- 7.0
Technical Accounting School	- 7.7	- 17.8	- 15.1	- 12.0	ا ئ	۱ 3.2	- 6.7
College Incomplete and Technical School	<b>-</b> 4.7	- 18.2	<b>-</b> 9.9	+ 21.8	- 4.5	ן זי יע	<b>।</b> 8.8
College Graduate - Not Accounting Major	<b>ا</b> ع•8	- 17.0	н 8.0	- 2.7	+ 2.6	- 7.0	+ 7.6
College Graduate - Accounting Major	+ 4.2	<b>I</b> 5.5	<b>-</b> 1.8	+ 10°2	+ 16.0	- 7.0	- 9.6
Graduate School	+ 34.0	+ 29.3	+ 22.3	+ 50.5	+ 31.7	+ 61.2	- 1.9
Total of All Candidates	0.0	1 9.5	7° <sub>†</sub> –	+ 9.7	+ 7.6	- 4.6	- 7.4

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	CANDIDATES WHO QUALIFIED IN MAY CLASSIFIED BY EDUCATION AND 7
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<b>5</b> 10 10	1949, A WHEN THE
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Total Candidates	Total College Graduates	Correge Graduate - Accounting Major Graduate School	College Graduate - Not Accounting Major	Total Non-Graduates	College Incomplete and Technical School	Technical Accounting School	High School Only College Incomplete		Total Candidates	Total College Graduates	Graduate School	College Graduate - Not Accounting Major College Graduate - Accounting Major	Total Non-Graduates	College Incomplete and Technical School	College Incomplete	High School Only		EDUCATION		CANDIDATES WHO QUALIF CLASSIFIED BY EDUCA	
100.0	100.0	100.0	100.0	100.0	100.0	100.0	0°00T 0°00T		1,289	888	138	135 615	401	88	172	22		Total		TED IN MAY	
23.2	24.7	23.9	23.0	19.9	9.1	11.0	33 <b>.</b> 7		299	219	33	31 155	80	ထင်	- 58 - 58	Ч		lst Time		ABULATED	· · ·
29.2	31.0	30.4 34.1	31.1	25.2	31.8	19.3	26,2 72,7	PER	377	276	47	187	101	N8.1	2 5 7 5	J	NUMBER	2nd Time		OVEMBER AS TO W	
22•3	22.2	23.1	18.5	22.7	25.0	23.5	19.2 19.2	CENTAGES	288	197	30	142	91	22 22	မ္က မ္ကာ	œ	OF CANDI	3rd Time		1949, AN HEN THEY	
12.1	12.4	12.4 9.4	15.6	11.5	12.5	15.1	8.7 8.7		156	110	51	21 76	46	 	51	N	DATES	4th Time		D MAY 19 PASSED	
7.1	6.0	7.3	8.1	9.5	10.2	12.6	7.6 7.5		91	53	10	8° Ħ	38	5	13	Ч		5th Time		50	
6.1	3.7	3.6	3.7	11.2	11.4	18.5	22.7 4,6		78	33	5	ъ 23 г	45	10	ນ ຜ	তা		5th <u>Time</u>	10+00		

SCHEDULE III-b Page 1

## SUMMARY OF ATTEMPTS AT EXAMINATION BY UNSUCCESSFUL CANDIDATES CLASSIFIED AS TO EDUCATION AND EXPERIENCE

(MAY 1949, NOVEMBER 1949, AND MAY 1950)

College Graduate - Not Accounting Major College Incomplete and Technical School Technical Accounting School College Incomplete College Graduate - Not Accounting Major College Incomplete and Technical School College Incomplete High School Only College Graduate - Accounting Major High School Only College Graduate - Accounting Major Technical Accounting School EDUCATION 206 874 707 446 653 2,145 236 5,267 100.0 100.0 100.0 100.0 100.0 100.0 Total 77 501 252 144 286 914 74 74 Attempt First 37°4 32.3 43.8 42.6 42.7 NUMBER OF CANDIDATES WHO HAVE COMPLETED THEIR Attempt Second 1,239 22.3 17.7 24.2 24.2 24.2 24.2 24.6 23.5 28.4 46 171 171 163 527 67 PERCENTAGES Attempt Third 15.0 14.3 10.5 16.0 14.0 12.2 101 326 738 Fourth Attempt 9°7 4.8 11.0 11.4 8.6 8.2 8.6 Attempt Fifth 5.2 5.75.46 0.26408 5.5 108 + 38 + 14Sixth Attempt or More 5.1 6.0 314 12934 6959 16

Total

Graduate School

Total

Graduate School

SCHEDULE III-b. Page 2

# SUMMARY OF ATTEMPTS AT EXAMINATION BY UNSUCCESSFUL CANDIDATES CLASSIFIED AS TO EDUCATION AND EXPERIENCE

# (MAY 1949, NOVEMBER 1949, AND MAY 1950)

		Ν	UMBER OF CAI	NDIDATES WH	O HAVE COMP	LETED THEIR	
EXPERIENCE	Tota1	First Attempt	Second Attempt	Third Attempt	Fourth Attempt	Fifth Attempt	Sixth or More Attempt
None Non-Public Public, Less Than 2 Years Public, 2 - 4 Years Public, 4 - 6 Years Public, 0 Ver 6 Years	672 966 1,048 1,175 727 679	564 502 4442 156 123	71 227 316 323 187 115	26 112 164 176 152 108	70 70 109 90	27 62 71 82	28 58 161
Total	5,267	2,248	1,239	738	453	275	314
			PE	RCENTAGES			
None Non-Public	100.0 100.0	83°9	10.6 23.5	3°9	.9	ល ឈយ	2.9 7
Public, Less Than 2 Years Public, 2 - 4 Years	100.0	42.2	30.1 27.5	15.0	9.2 9.3	ა ი ა ი	1.9 3.7
Public, 4 - 6 Years Public, Over 6 Years	100.0	21.4 18.1	25.7 16.9	20.9 15.9	14.2 13.3	9°8 15 <b>·</b> 1	23.7
Total	100.0	42.7	23.5	14.0	8.6	5.2	6.0

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## CANDIDATES TAKING THE EXAMINATION FOR THE FIRST TIME CLASSIFIED AS TO EDUCATION AND EXPERIENCE

(MAY 1949, NOVEMBER 1949, AND MAY 1950 SAMPLES)

EDUCATION EDUCATION High School Only College Incomplete Technical Accounting School College Incomplete and Technical School Total Non-Graduates College Graduate - Not Accounting Major College Graduate - Accounting Major Graduate School Total College Graduates Total Successful Candidates	Total 56 2099 219 2019	Experience 51 72 72 72 72	Non- Public SUCCESS 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	EXPER Less Than 2 yrs. 0 11 1 2 29 29 29 14 5 29 15 49 63	DATIES 15 15 15 15 15 15 15 15 15 15 15 15 15	BLIC 4-6 yrs. 9 22 22 22 22 22
<pre>Pechnical Accounting School Sollege Incomplete and Technical School Total Non-Graduates Sollege Graduate - Not Accounting Major Sollege Graduate - Accounting Major Fraduate School Total College Graduates Fotal Successful Candidates</pre>	200 210 210 210 210 210 210 210 210 210	72 51 32 6 12 0 0	<u> </u>	63 45 45 85 4 12 12 12 12 12 12 12 12 12 12 12 12 12	8 6 5 55 2 +0	
<b>Total Successful Candidates</b>	299	72	55 UNSUCCE	63 SSFUL CANDI	81 DATES	22
High School Only College Incomplete Technical Accounting School College Incomplete and Technical School	252 144	185 28	43 105 51	14500	36 6 <b>8</b> 23	19 29 15
Total Non-Graduates	<u>974</u>	227	214	132	208	49
College Graduate - Not Accounting Major College Graduate - Accounting Major Graduate School	286 74	260 10	193 21	22 22 61 22 8	63 174	o.≢⊑
Total College Graduates	1,274	337	288	309	250	65
Total Unsuccessful Candidates	2,248	<del>1</del> 95	502	141	458	159

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# PERCENTAGE ANALYSIS OF SUCCESSFUL AND UNSUCCESSFUL CANDIDATES CLASSIFIED AS TO EDUCATION AND EXPERIENCE

(MAY 1949, NOVEMBER 1949, AND MAY 1950 SAMPLES)

EXPERIENCE

EDUCATION	Total	No Experience	Non- Public SUCCESS	Less Than 2 yrs. FUL CANDIDA	<u>2-4 yrs.</u> TES	4-6 yrs.
College Incomplete Technical Accounting School College Incomplete and Technical School	19°4 7°3	0.0	ں 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	س 	1.0 1.0	0.2
Total Non-Graduates	26.7	7.0	4.7	<u>1.4</u>	7.0	3.0
College Graduate - Not Accounting Major College Graduate - Accounting Major Graduate School	10.4 51.8 11.1	2.0 14.1 1.0	11.4 2.0	1.7 9.7 5.0	5.0 13.4 <u>1.7</u>	2°6
Total College Graduates	73.3	17.1	<u>13.7</u>	16.4	20.1	4.3
Total Successful Candidates	100.0	24.1	18,4	21.1	27.1	7.3
			UNSUCCE	SSFUL CANDI	DATES	
High School Only College Incomplete	22,3	8.2	4.7	6°2 3'	1.0	°8 1°4
Technical Accounting School College Incomplete and Technical School	11.2 6.4	1.2 .6	2°7 1.9	2.0 .8	2°7 1°6	1.3 .7
Total Non-Graduates	43.3	10.0	9.5	5.9	9.3	4.2
College Graduate - Not Accounting Major College Graduate - Accounting Major Graduate School	12.7 40.7 3.3	3.0 11.6	8.3 9.6	2.7 10.1	2.8 7.7 6	2.0
Total College Graduates	56.7	15.0	12.8	<u>13.7</u>	11.1	3.0
Total Unsuccessful Candidates	100.0	<u>25.1</u>	22.3	19.6	20.3	7.2

Total	None Non-Public Public, Less Than 2 Years Public, 4 - 4 Years Public, 4 - 6 Years Public, 0ver 6 Years	EXPERIENCE	EDUCATION High School Only College Incomplete Technical Accounting School College Incomplete and Technical School College Graduate - Not Accounting Major College Graduate - Accounting Major Graduate School Total
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100.0	9.8 9.8		May 1949 13.7 13.7 13.7 13.7 100.0
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COMPARISON OF EDUCATION AND EXPERIENCE OF CANDIDATES PASSING EACH SUBJECT AS SHOWN BY THE STUDIES FOR 1949 AND MAY 1950 (ALL DATA REDUCED TO PERCENTAGES)

SCHEDULE V.

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### APPENDIX

In the studies which have been made of the effect of differences in education on results obtained by CPA candidates, the classification has been into large groups. It has been suggested in prior studies that there might be significant differences in the quality of education received by various candidates in each large group.

A measurement of such differences for college graduates majoring in accounting is now possible with a sufficiently large sample to justify some reliance on conclusions drawn therefrom.

To obtain a first measure of the differences in the results of candidates graduating from different schools, all such candidates for whom information was available were separated into two large groups. The first group included those students who were graduates from schools of business belonging as members or as associates of the American Association of Collegiate Schools of Business. The second group includes graduates in accounting from all other four-year colleges or universities. Data for these groups were tabulated according to experience and number of attempts at the examination. Tabulations shown in Schedules A, B and C cover the May 1949, the November 1949 and May 1950 examinations. A summary of the three tabulations is presented in Schedule D.

The consistency of the samples for the three examinations indicates reliability of the samples and, while they include only 3,324 candidates out of possibly 14,000 accounting majors taking the examination at the three dates, it appears that they are adequate for supporting conclusions.

These schedules bear out prior studies which show that experience in public accounting is very helpful to candidates in passing the examination. Candidates with two to four years of experience did almost twice as well as candidates with no experience. The percentages shown in Schedule D show a definite trend toward a higher passing percentage until the amount of experience has reached to more than four years of public accounting, at which point there is a decline. The figures also show that the second and third attempts result in a higher passing percentage than does the first attempt. These conclusions had been drawn previously from the general studies and are merely confirmed.

The principal significance of these schedules lies in the definite superiority shown by the graduates of member schools over graduates of nonmember schools. This superiority is evident under all comparable conditions as to experience and for groups of candidates making a various number of attempts at the examination. It may be especially significant that as experience increases, the candidates from member schools increase their advantage. Note that without experience the advantage was 15.5% to 11.2% or only 30%, whereas with two to four years of public accounting the advantage increased to 35.1% to 19.5% or 80%.

Schedule D also makes possible a rough approximation of the percentage of accounting majors finally passing. If the number of candidates had been constant for the three examinations and for a number of prior examinations, we could conclude that 555 out of 841 candidates from member schools finally pass the examination. That would show 66% passing. However, the number of candidates was increasing rapidly, and probably this figure is much too small. Certainly it would seem to be a minimum. If candidates do not drop out, we would find that 18.9% have passed the first time, another 24.9% of the original group the second time, 18.9% the third attempt and 11.6% thereafter, or a total of 74% who finally pass.

Since the breakdown into member and non-member schools is only a preliminary device to permit the inclusion of all schools, even if a school had only one candidate during the period under study, additional analysis is needed. There were included among the member schools a number who had a sufficiently large number of candidates to permit study by individual schools. Results of the analysis by individual schools for candidates taking the examination for the first time are shown in Schedule E. Since the sample is small for many schools, the results may not be representative for those schools and, therefore, the results for schools with fewer than ten candidates were not tabulated separately. The range shown in Schedule E of from 64.8% passing down to zero percent passing is not entirely surprising but is not encouraging from the standpoint of professional education.

Membership in this association is based on certain requirements as to courses, library facilities, teaching load of teachers, degrees held by the teachers, etc. Membership is dependent upon the entire school of business and not merely the accounting department. However, to the extent that success of graduates on a professional examination measures the quality of a school, it must be concluded that the standards set, or the enforcement of the standards, have not assured students of high quality professional training in accounting. Apart from the problems inherent in any attempt to "rate a school," there are many other possible explanations for the failure of some schools to train their CPA aspirants.

While available information is limited and does not include any statistics concerning several of the largest schools in the association, there is no reason to believe that it does not present an accurate measure of the differences between schools. Such differences appear to be very large. It was interesting to find that the school with the highest percentage and the school with the lowest percentage are in the same state. Reports of the Committee on Selection of Personnel have pointed out the large differences found on their tests. While we do not know whether the same schools have corresponding rankings on those tests and in this analysis, it would not be surprising to find a considerable degree of similarity. In the past certain other professions have found that the schools need strong support from the profession to raise their standards of training. Possibly schools offering training in accounting would welcome such support.

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COMPARISON OF A GROUP OF MAY, 1949 CPA CANDIDATES AS TO STANDING OF SCHOOL, EXPERIENCE AND NUMBER OF EXAMINATION ATTEMPTS

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N. The candidates included in the study are from a number of states and include all candidates from those states for whom data were available.

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COMPARISON OF A GROUP OF MAY, 1950 CPA CANDIDATES AS TO STANDING OF SCHOOL, EXPERIENCE AND NUMBER OF EXAMINATION ATTEMPTS 

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DETAIL OF RESULTS OF FIRST-TIME CANDIDATES BY INDIVIDUAL SCHOOLS BELONGING TO THE AMERICAN ASSOCIATION OF COLLEGIATE SCHOOLS OF BUSINESS (BASED ON ALL REPORTED INFORMATION FOR THREE EXAMINATIONS)

			Non-Public				PUBLIC EXPERIENCE					
			No Exp	erience	Expe	rience	Less Th	an 2 Yrs.	2 - 4	Years	Over 1	+ Years
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