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Analysis of the Effect of Differences in Age, Education and Experience on Candidates Taking the CPA Examination in November 1948

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ANALYSIS OF THE EFFECT OF DIFFERENCES
IN AGE, EDUCATION AND EXPERIENCE ON CANDIDATES
TAKING THE CPA EXAMINATION IN NOVEMBER 1948

DESCRIPTION OF THE DATA

The charts, tables and comments are based on two samples taken from information provided by State Boards as to candidates taking the uniform CPA examination in November 1948. One sample consists of 366 candidates who qualified for their certificate as a result of the November 1948 examination. This sample included all of the successful candidates of several states. The other sample consisted of 1,101 candidates who took the November 1948 examination, but who did not qualify for the CPA certificate. This sample included all of the unsuccessful candidates from several states. The two samples include some of the same states as well as some different states; therefore, direct comparisons of the number of candidates that were successful with the number of candidates that were unsuccessful are not valid. However, percentage comparisons should be valid.

The data on which this study is based gave information as to age, education, experience, results on prior examinations, and results on the November 1948 examination.

CLASSIFICATION AND DEFINITIONS

A successful candidate has been defined as one, who, after the November 1948 examination, is credited by his state board with having passed all four subjects making up the Uniform Examination.

Age classification provided for seven groups. These appear to not present any ambiguity or definition difficulty. The

form used provided for six classifications as to education. Certain difficulties arise in connection with these classifications. A classification of "College Incomplete" would appear to include all candidates who had ever attended college but who had not received a degree. They might range from a person who had "flunked out" soon after entering college to a person who had completed all except a few hours of work for a degree. A classification, "Technical Accounting School," was presumed to include the "commercial colleges," the "correspondence schools," etc. There is no distinction between those who have completed the courses and those who have not completed the courses. Many candidates had attended college and technical school. These have been classified in the technical school group. The attempted division between graduates who majored in accounting and those who did not major in accounting is somewhat questionable, because of the probable lack of information.

The principal problem that arose in the classifications as to experience, arose because a candidate may have had both non-public experience and public experience. Such candidates have been classified under the appropriate public experience heading.

INTERPRETATION OF SCHEDULES

Schedule Ia. deals with the data classified as to education and experience, while Charts I. and II. and Schedule Ib. express the same data in percentages. Candidates having no more than a high school education were only 4.9% of the successful candidates, but they were three times (13.6%) that percentage of the unsuccessful candidates. Conversely, college graduates

were a larger percentage of the successful candidates than they were of the unsuccessful candidates. Other factors being equal, it appears that an increased amount of education increases passes among candidates. It may also be pointed out that college graduates were about 60% of the total group studied while high school graduates were only about 12% of the total number of candidates. If the samples had included New York State, there would be a still further reduction in the percentage of high school graduates and an increase in the college graduate percentage. Evidently the profession has few young men employed who have only a high school education.

There was an unexplainable favorable result for candidates in the college incomplete group. Probably this result is a sampling error which will disappear with subsequent study. The performance of the technical accounting school group was not as unfavorable as the high school group, but it was not up to the performance of the college graduates.

When the factor of experience is considered, it is found that 9.4% of the unsuccessful candidates had no accounting experience but that only 4.6%, or about one-half as great a percentage, of the successful candidates had no experience. It therefore appears that complete lack of experience was a handicap to the candidates in that group. Non-public experience and public experience up to 4 years appeared to be helpful to candidates because these groups represent a greater percentage of the successful candidates than they represent of the unsuccessful

candidates. Examination of the percentages would lead to the conclusion that more than 4 years of experience reduces a candidate's chance of passing. However, it is probable that the number of failures in this group is inflated by the persistence of persons engaged in practice who take the examination repeatedly without success. Certainly there would be considerable carry-over from the unsuccessful candidates that were in the group having from 2 - 4 years of experience.

When attention is turned to the combined effect of education and experience, it is found that of the candidates who were not college graduates and had no experience, only five passed while fifty-five failed. Graduates had better success without experience but did not perform as well as the average of the college graduate group. Evidently some amount of experience was helpful to candidates in passing, but a great amount contributes nothing more to success. Certainly it appears that either a considerable amount of formal education or some experience is almost essential for success on the examination; however, see Schedules IIa. and IIb., and the comments related thereto for another possible explanation of the conclusions as to experience.

Schedules IIa. and IIb. deal with the number of times the examination has been taken by the various groups of candidates. Attention is directed to the fact that of the successful candidates, 27% of the non-graduates as compared with 35% of the college graduates, achieved success on their first attempt. It is also interesting to observe that 87.4% of the successful candidates passed on their first, second or third attempt.

Of the 1101 unsuccessful candidates, 40.8% were taking the examination for the first time, 24.4% were taking it for the second time and 13% were taking it the third time, which leaves only 21.8% that have made over three attempts at the examination. When the data are broken down into groups based on education, it is found that as to college graduates, even a higher percentage were taking the examination for the first three times. This might be because of their higher rate of success on the examination or it might be because of a rapid growth in the number of graduates taking the examination. The grouping of candidates according to experience shows that there are some candidates that continue to take the examination even though they do not engage in accounting work after their first attempt. However the distribution of candidates according to the number of attempts indicates that a number of candidates continue in public accounting, thereby increasing their experience, with each successive attempt at the examination. It seems that very few candidates have as much as four years of public accounting experience when they first take the examination and that the largest number have from 2 to 4 years of experience. This may well be the result of state rules governing admission to the examination. Since candidates continue in accounting even after several unsuccessful attempts at the examination, the unfavorable results for candidates having over four years of experience (see Schedules Ia. and Ib.) might be explained by the initial lack of ability, as far as examinations test ability, of such candidates. Most of such candidates probably took the examination first when they had less experience

and were unsuccessful at that time. Therefore, it is doubtful if it can be concluded that an increased amount of experience reduces the chance of passing. A study of only those candidates taking the examination for the first time, might show that the situation is very different from that which is implied in Schedules Ia. and Ib.

An application of the data shown in Schedule IIa. is presented in Schedule VI.

Charts III. and IV. and Schedules IIIa. and IIIb. deal with the partial success of the unsuccessful candidates. They present an analysis of the candidates' success on each subject of the examination. Of these 1101 candidates, 30.3% have passed Auditing, 52.4% have passed Law, 31.8% have passed Theory and 28.2% have passed Practice. When these data are broken down into groups according to education, it is found that as to Auditing there is not much variation between the college graduates and the non-college graduates. However the college graduates did considerably better in Law and Practice than did the non-graduates and they did slightly better in Theory than the non-graduates. The "high school only" group and the "technical accounting school" group were below average in three subjects and only slightly above in one, while the "college incomplete" group was considerably above average in one subject and below average in three subjects. The graduates with a major in accounting were substantially above average in Practice, whereas the small group from graduate schools was low in Practice but led in all other subjects.

When we turn to the same data classified according to the experience of the candidates, we find that experience seemed to have no bearing at all on the results in Commercial Law. However public accounting experience seems to have been very helpful in passing Auditing and Theory. The performance on the Practice examination of the candidates having no experience and of those having from one to four years in public accounting was considerably above the other groups. Candidates with non-public experience were below the average in all subjects.

Chart V. and Schedules IVa. and IVb. show the data on successful candidates classified by age as well as by education and experience. As might be expected, the more experienced candidates were older than the less experienced ones. However, there were very few successful candidates that were over 35 years of age; 75.7% being 34 or under. The classification as to education reveals that successful graduates were younger than the successful non-college graduates. Only 62% of the non-graduates were under 35 while 84% of the college graduates were under 35. Evidently the graduates have more than made up the time spent in school. Also it may be significant that the technical school group was the youngest of the non-college groups while the accounting majors were younger than the non-majors within the college graduate groups.

Schedules Va. and Vb. are comparable to IVa. and IVb. except they concern the unsuccessful candidates. A comparison of IVa. with Va. shows that successful candidates having a given amount of experience were younger than the corresponding unsuc-

cessful candidates. Only 65.4% of unsuccessful candidates were under 35 compared with 75.7% of the successful candidates who were under 35. It might be that starting into accounting work at an early age is helpful or it might be that the more able individuals completed school sooner and that ability was a material factor in their success on the examination. Schedule Va. shows the same type of correlation between increasing experience and increasing age of candidates as is shown in IVa. Some additional information is shown when the data are expressed as percentages of each age total. It is found that only 9.4% of the candidates were without some experience, but that 38% of the persons under 25 were without experience. Also it is interesting to note that 50% or more of the candidates over 40 years old had over six years public accounting experience. Evidently age combined with experience is not helpful on the examination because the group having over six years of experience had less than average success on the examination. An examination of the cumulative percentages in Schedule Vb. shows that unsuccessful candidates who are college graduates are younger than the unsuccessful non-graduates.

Schedule VI shows the possible effect of an increase in number of candidates on the percentage of candidates passing a given examination. It is based on the number of attempts necessary as computed in Schedule II. This theoretical example, using the approximate actual numbers of candidates taking the uniform examination each period may be helpful in explaining the decreasing percentage of passes on some recent examinations.

QUALIFICATIONS AND LIMITATIONS

The principal irregularity in the analysis appears to be in the performance of candidates who did not complete college and in the performance of candidates with a private accounting background. There is reason to believe that these results are due principally to the small sample. There is a "lump" in the classification "College Incomplete" with "Non-public" experience which might disappear with an increase in the number of cases studied. In this study there were 12 successful candidates as compared with only 7 unsuccessful candidates falling into this classification.

On the basis of this single sample of data, it may be tentatively concluded that the possession of both formal education and actual accounting experience were helpful to candidates on the November 1948 examination. However, such conclusion may well be critically reviewed in the light of other probable factors that may have effected the same result without its being attributable to either of these two factors.

The first of these that might come to mind is the original accounting aptitude of the candidates. Certainly aptitude is not equal for all people. The American Institute's battery of tests clearly discloses a great range of aptitudes even within a first-year college group who presumably have had some prior screening. It might be possible that the aptitude of the college graduates was higher or lower than that of the non-college graduates. If their aptitude were higher, that factor rather than the formal education they received might

explain their more favorable results. It is hoped that sometime it will be possible to compare the aptitudes of a group of non-college candidates with the aptitude of the college graduates through the use by one or more states of the Orientation test.

The second explanation of variations that could invalidate the conclusions, might be a favorable or unfavorable type of experience that one group receives in contrast with the other group. For instance, high school graduates entering accounting might be advanced more slowly than college graduates because of a question as to their ability, or they might be hired only by firms that offer them little valuable experience. It might well work the other way also, in that they might be with firms having small clients where a desirable range of experience could quickly be obtained. We have no data to indicate whether there is any difference in the quality of experience, and if there is such a difference, we have no knowledge of its effect.

A third factor that might cause these results to be invalid in general would be in the examination itself. Unquestionably an examination could be prepared in certain areas which would favor the experienced over the inexperienced candidate, and likewise an examination could favor the candidate who has just completed accounting courses over the one who has taken no formal courses or who has taken them several years previously.

While there ~~seems to be~~ nothing in the November 1948 examination to indicate such weighting in any direction, it might exist in other examinations even though such weighting did not exist in November and, therefore, these results may not be typical.

IMPLICATIONS OF THE RESULTS

If the conclusion that both education, and to some extent experience, are very helpful factors in passing the examination is proven by subsequent studies to be valid, a question is raised as to why most candidates with the desirable amount of formal education and the desirable amount of experience do not pass the examination the first time. It seems to be true that most candidates have either passed or given up after the third attempt (because only 21.8% of the unsuccessful candidates were making the fourth or later attempt), but clearly many do not pass their first or even second or third attempt. Why should this be true of candidates who have both formal education and experience? There are 171 candidates who were unsuccessful on their third or subsequent attempt and who were college graduates and who had some public accounting experience. This represented only 16.3% of the total but it is still a substantial number.

Several of the possible explanations have been indicated and additional ones come to mind. Possible explanations could include any or all of the following:

1. Very little ability and aptitude for accounting.
2. Poor quality of the education they received.
3. Poor quality of the experience they have had.
4. Incorrect attitude on the candidate's part.
5. Defects in the examination or in the grading thereof.
6. Mental or physical handicaps in taking an examination.

A full discussion of these possibilities does not seem appropriate at this time, but they do deserve some slight elaboration.

It is very unfortunate if persons of little ability and very little aptitude for accounting ever enter public accounting because they will be unable to succeed and probably will be unhappy in their work. However, there can be little question but that this poor selection does at times occur. Generally such persons would drop out of the profession soon, but they may have acquired some experience and therefore when taking the examination, they would be classified in the group we are considering. Also there is the possibility that some practices and some areas of many practices can utilize a few persons of very little ability. The prospective accountant now has tests available which should enable him to avoid such a bad selection of a profession. It is to be hoped that a wider use of various tests will limit the number of inapt persons entering the profession, but certainly they will be with us in some number for a considerable time.

In considering the possibility that the education received by some candidates is of very poor quality, it must be kept in mind that normally accounting practitioners do not intend to employ the poorer students, but that in some instances it may happen. Even if only the better students were employed, I would still expect to find a high number of failures on the examination which were caused by educational defects. In many schools there

is practically no screening of entering students nor of students majoring in any particular area. Under the existing system in many schools the grades are a relative matter. An "A" student need not be a "good" student in any absolute sense, but he need merely be better than a given percentage of his classmates. Practically speaking, we have no professional schools of accounting. Accounting is a major program which is open to all students, whether they expect to enter, and are qualified to enter, public accounting or whether they hope to be private accountants, bookkeepers or even just learn a "little accounting" because it is as good as anything else. In addition, it appears probable that with the growth that has taken place in accounting; and considering the need for a general cultural and business education prior to undertaking an intensive study of accounting, there is not time in the usual four-year college program for an adequate presentation of accounting. Perhaps the time has arrived when the profession, working with teachers, should propose and press for the establishment of professional schools of accounting.

Experience as well as education could be of poor quality. Experience that consists mostly of repetitious detailed work will be of very little assistance to a person preparing for the CPA examination. A good program of staff training combined with rotation and variety in the assignments undertaken should prove very valuable. Experience must help to develop accounting and auditing judgment if it is to be of the greatest value to the candidate, and such development cannot come from

work which, in itself, does not require the exercise of judgment.

Undoubtedly one factor causing such a high percentage of "first time failures" on the CPA examination is the tendency of candidates to trust to luck rather than to adequate preparation. Candidates know that they can be credited with passing certain subjects even when they do not pass the others. This situation will cause many candidates to "try" the examination without preparation in all areas. If they are successful in part, they may prepare for the other sections or, having been "lucky" once they may again skimp on preparation. While there may be much merit in the policy of permitting candidates to obtain credit for various parts or combination of parts of the examination, such a procedure cannot be calculated to create a favorable condition for adequate initial preparation. It appears that the rules on this and on the matter of unlimited re-examination might well be the subject of careful and thorough study at this time when we are faced with a rapid increase in the number of candidates.

The possibility that the examination is either poorly prepared, or too difficult, or inappropriate, or poorly graded cannot be ignored. Both the examination and the grading procedure are continually studied for possibilities of that kind as well as for the purpose of improving them. In attempting to appraise the examination as such, there are several questions which arise and as to which there are presently no satisfactory answers. It is to be hoped that the profession will eventually provide the answers to these questions, but they have not been answered as of the present time. The first question is the level

of ability which public interest requires that the certificate should evidence. This is tied in with related questions as to whether a certificate shall be required for any public practice or whether there will be two, three or any number of classes or grades of public accountants. Complete restriction of practice would appear to require that a low level of ability be recognized as sufficient for certification. A limited restriction of practice might make a somewhat higher level advisable, while freedom of practice would seem to make a very high level of ability permissible, if not desirable, as a basis for certification. The direction that will be taken is not apparent, but until some uniformity is reached as to the level that should be the basis for the certificate, it is difficult to properly evaluate the present examinations. Probably they are now on a middle ground, but perhaps tending to a lower level, and undoubtedly they will stay there until the profession is on a single basis.

Finally it must be recognized that some persons are not as apt as others at taking examinations. They appear to "freeze up" mentally and give a very poor performance in comparison with others having equal ability. Some individuals may be so slow as to find even the present examinations too long, although the recent examinations have not been long in comparison with many of the prior examinations. Physical exhaustion may have its effect on some candidates. An examination running through two and one-half days is unquestionably tiring and the performance of some candidates may drop as a result of this factor.

COMPARATIVE DATA

A study similar to the study for November 1948 was made in 1947 of the November 1946 examination results. The findings of this 1947 study were reported on pages 69 - 76 of the Papers Presented at the Sixtieth Annual Meeting of the American Institute of Accountants which was published with the title, "Challenges to the Accounting Profession 1947."

The 1947 study included 1,200 candidates. There are several interesting comparisons that may be made between the two studies. Some such comparisons are presented in Schedule VII. In considering this comparison, the difference in the bases used should be considered. The most noticeable change as to education of candidates succeeding in the four subjects is the increase in college graduates who did not major in accounting and the decrease in the relative number of successful candidates coming from technical schools. In the comparison of candidates classified as to experience, the great change is in the percentage of candidates having non-public experience. These changes might be caused by a change in the percentage of the total candidates that fall in the affected categories or it might be caused by a change in their ratio of successes to failures or it might be caused by both factors.

Comparisons as to many other features are difficult because the states included in the samples were not completely identical. However, it does appear probable that there was a marked increase in the percentage that college graduates represented of the total candidates. Of the 1,200 November 1946

candidates, only about 47% were graduates while almost 57% of the 1948 samples were college graduates. The increase in the graduate groups was mostly in those who did not major in accounting. At the same time there appears to have been some increase in the relative number of candidates having only a high school education, this percentage having increased from 7% to 11% in the two-year period. There also appears to have been an increase in the percentage of candidates taking the examination without any experience. In the 1946 figures there were only 4.1% having no experience. In the 1948 samples there were 8.2% of the totals who had no experience.

Other comparisons such as age of candidates may be made from the figures shown in the two studies.

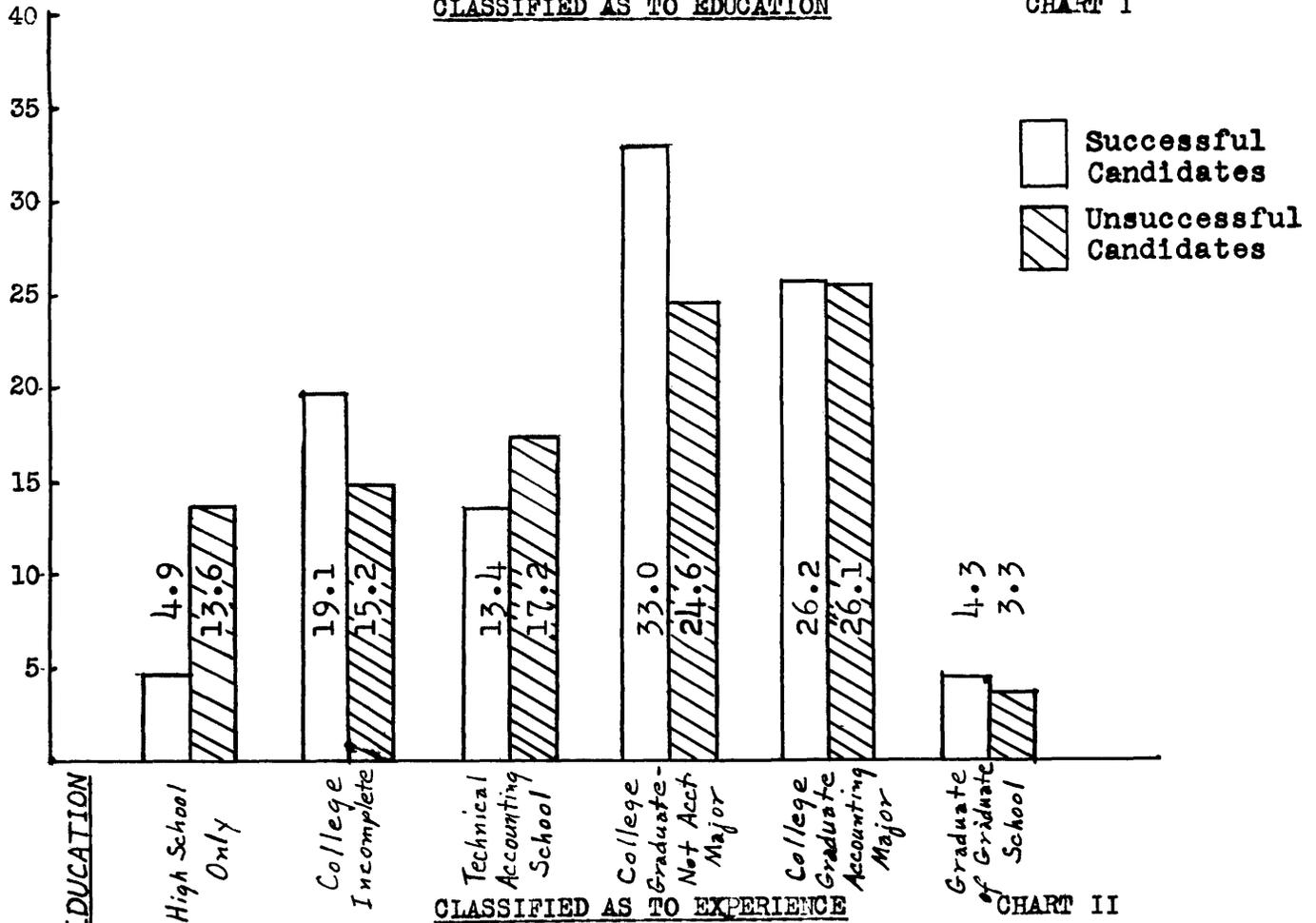
COMPARISON OF SUCCESSFUL AND UNSUCCESSFUL CANDIDATES

PERCENTAGES TO TOTALS

Percent

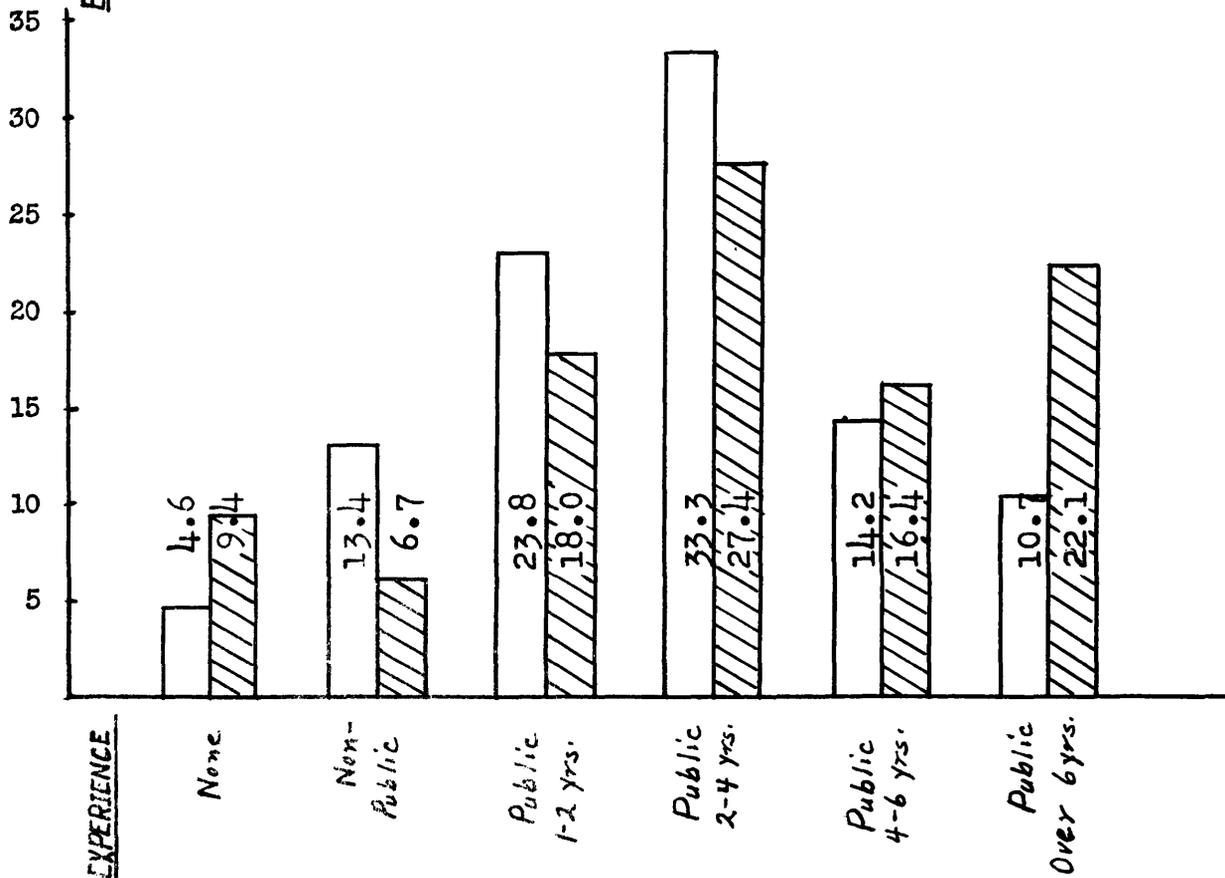
CLASSIFIED AS TO EDUCATION

CHART I

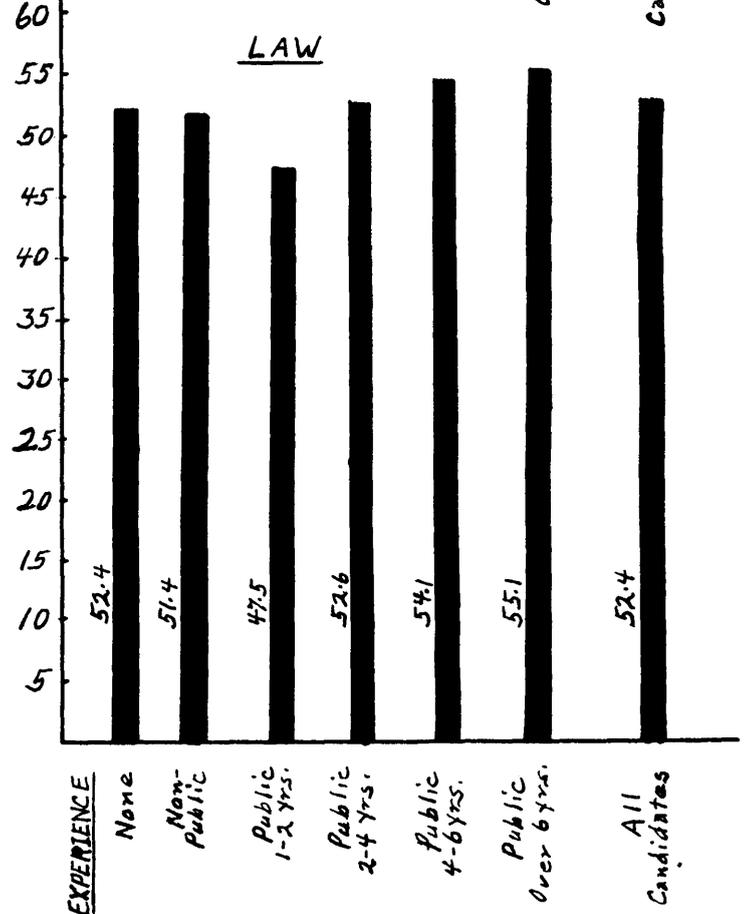
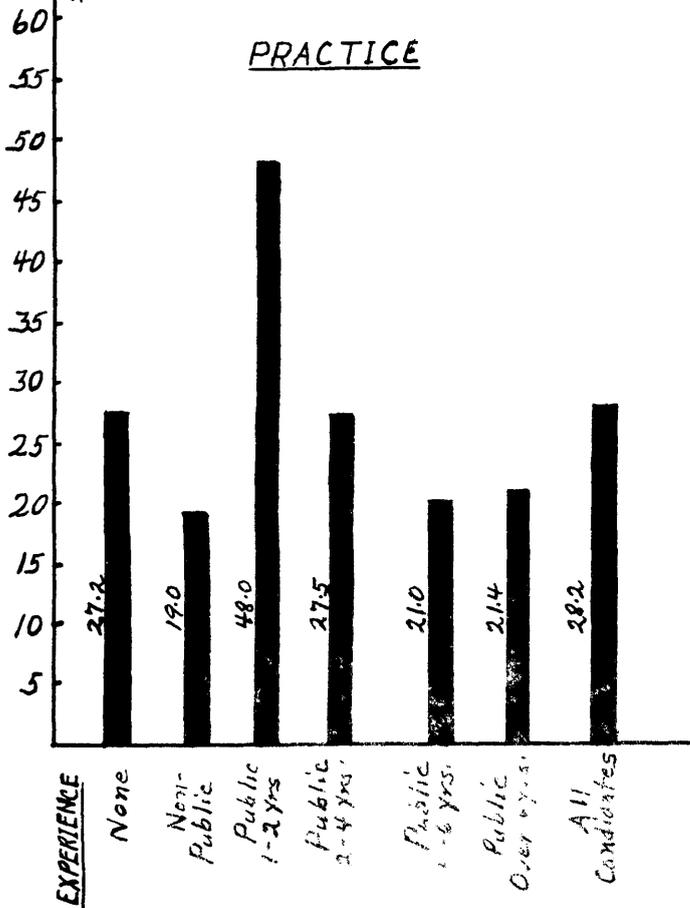
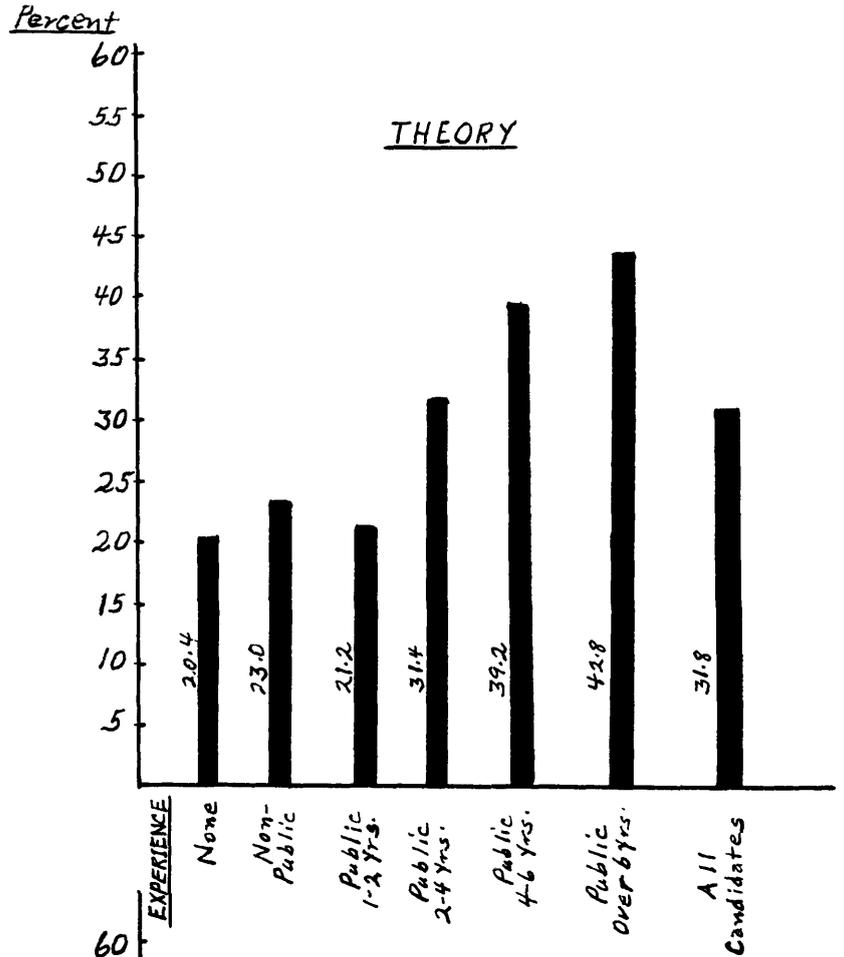
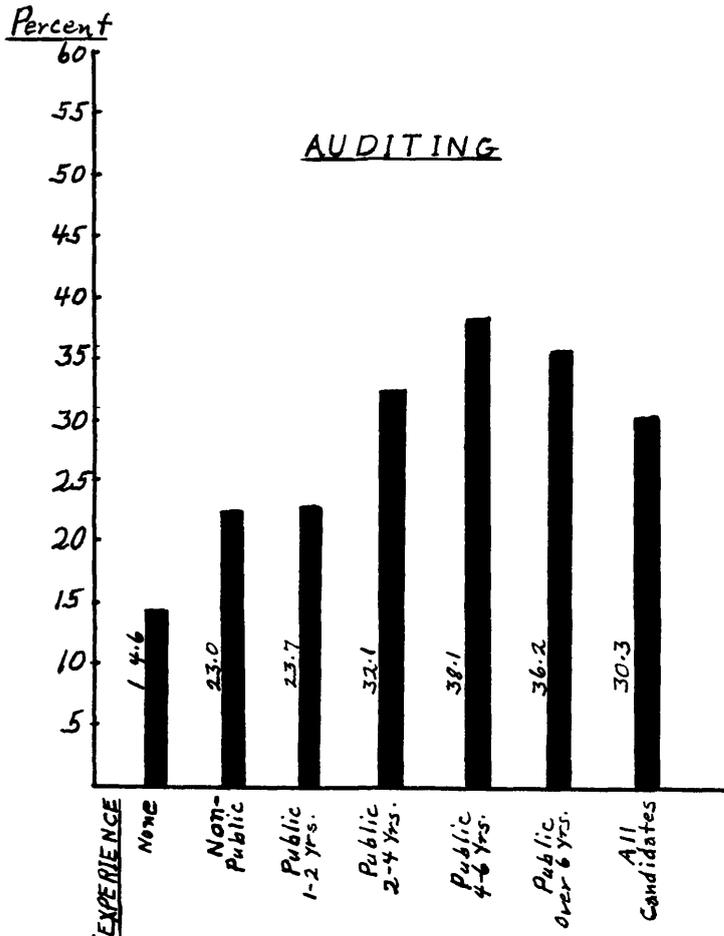


CLASSIFIED AS TO EXPERIENCE

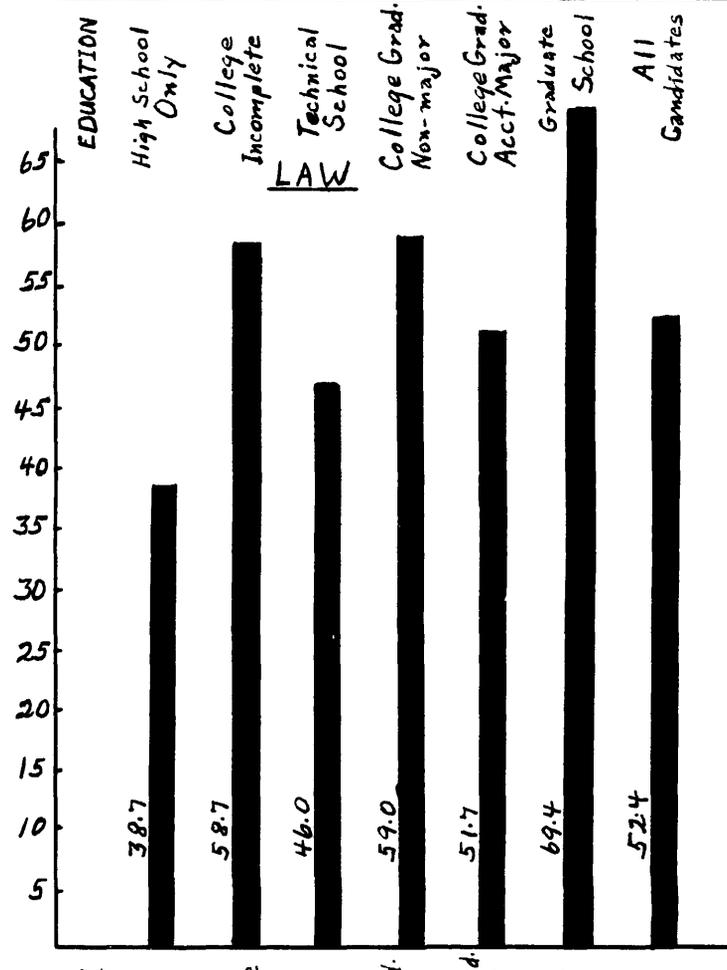
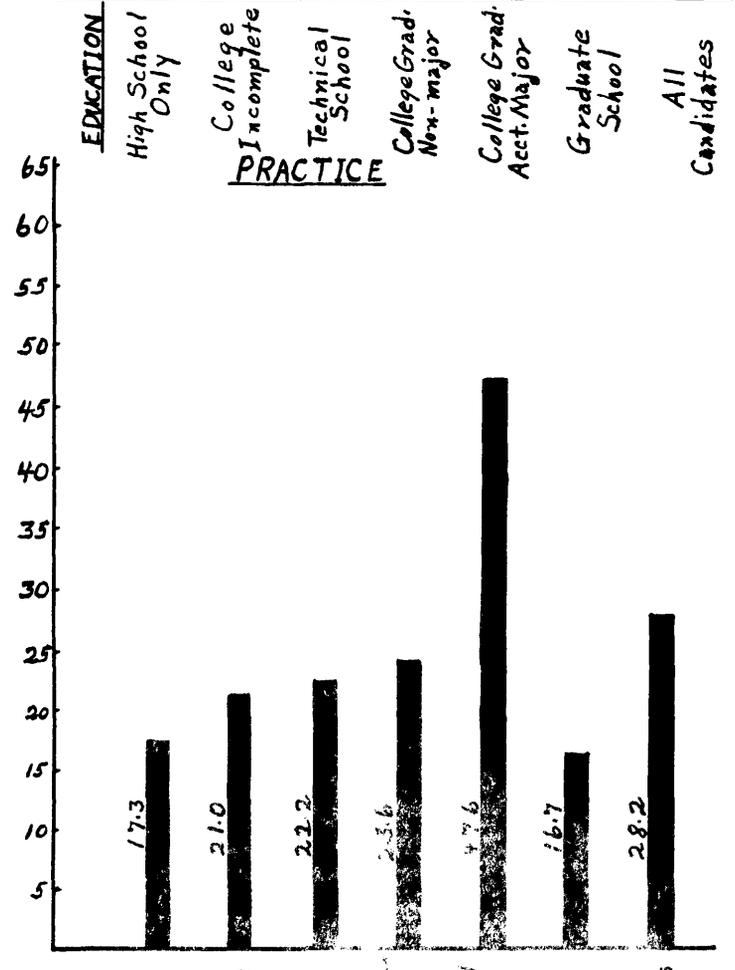
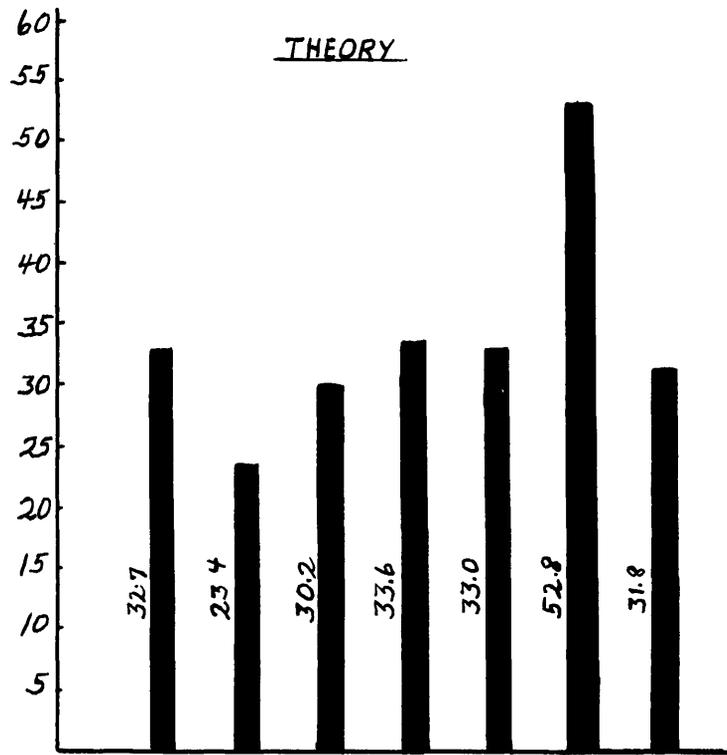
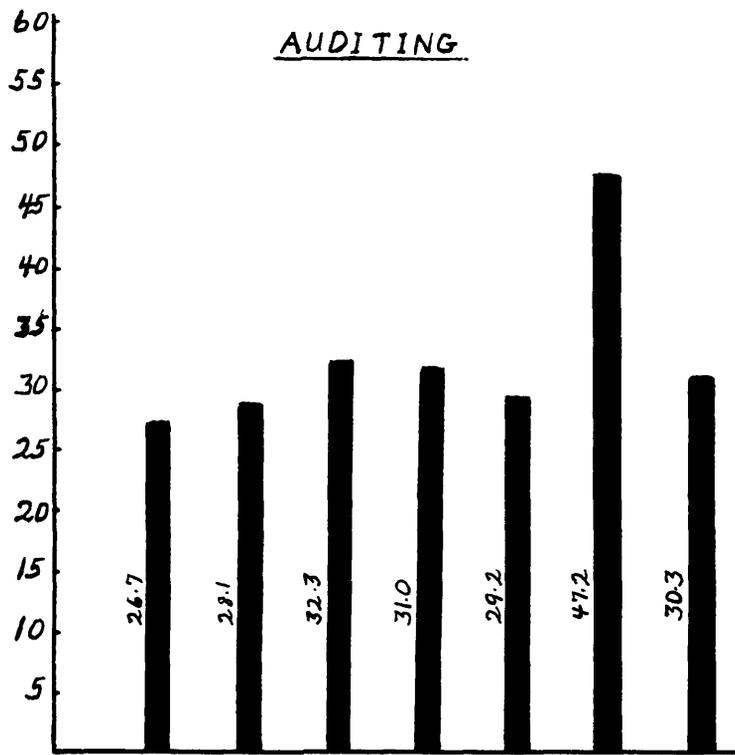
CHART II



PERCENTAGE OF UNSUCCESSFUL CANDIDATES, CLASSIFIED AS TO EXPERIENCE, THAT HAVE PASSED EACH SUBJECT



PERCENTAGE OF UNSUCCESSFUL CANDIDATES, CLASSIFIED AS TO EDUCATION, THAT HAVE PASSED EACH SUBJECT

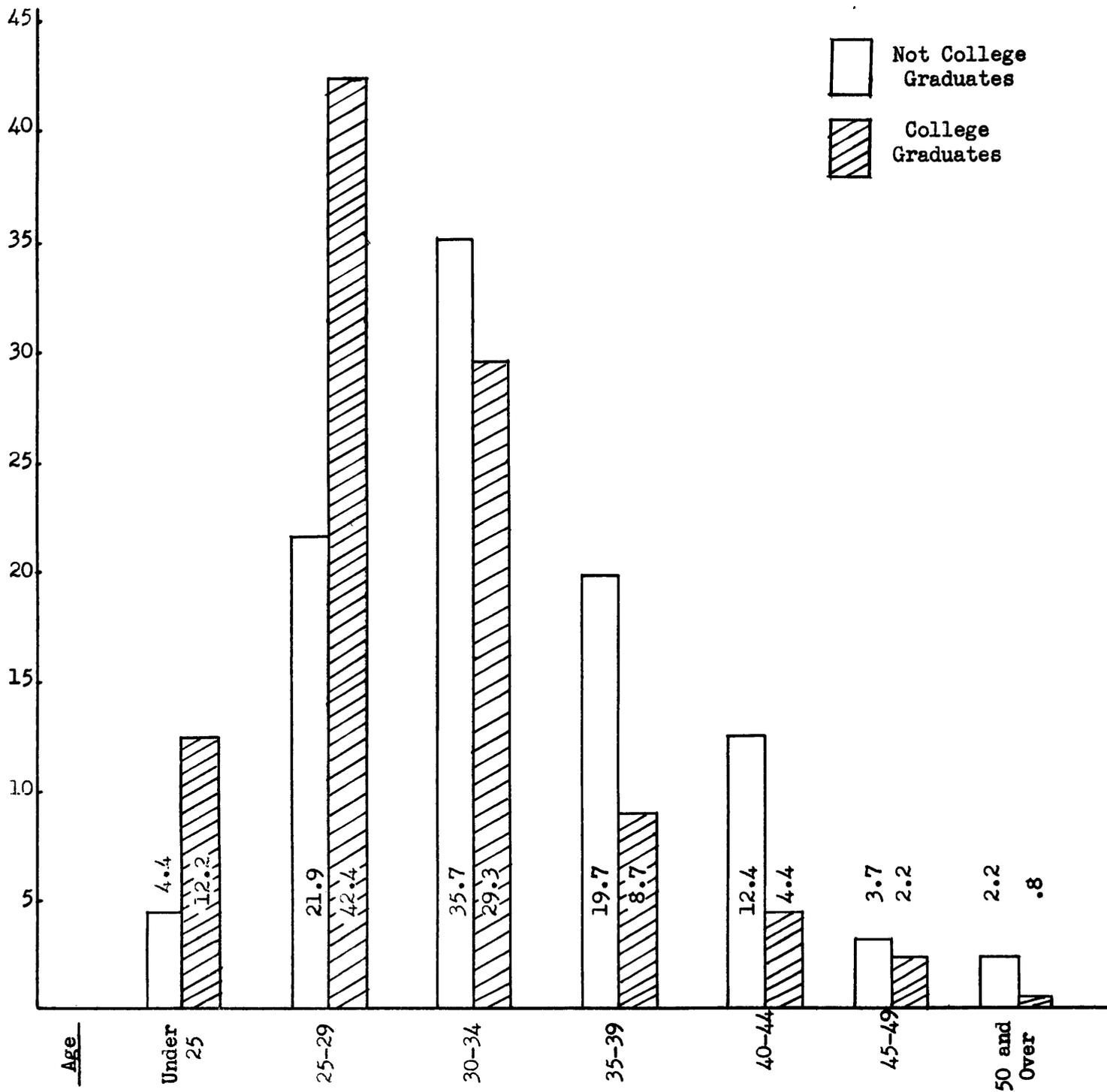


EDUCATION
 High School Only
 College Incomplete
 Technical School
 College Grad. Non-major
 College Grad. Acct. Major
 Graduate School
 All Candidates

EDUCATION
 High School Only
 College Incomplete
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 College Grad. Non-major
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 Graduate School
 All Candidates

COMPARISON OF AGE DISTRIBUTION OF COLLEGE GRADUATES WITH
NON-COLLEGE GRADUATES - SUCCESSFUL CANDIDATES

Percent



NUMBER OF SUCCESSFUL AND UNSUCCESSFUL CANDIDATES
CLASSIFIED AS TO EDUCATION AND EXPERIENCE
(SAMPLES FROM NOVEMBER, 1948 EXAMINATION)

EDUCATION	Total	EXPERIENCE									
		No Experience		Non-Public		PUBLIC					
		1-2 yrs.	2-4 yrs.	4-6 yrs.	Over 6 yrs.	1-2 yrs.	2-4 yrs.				
<u>High School</u>											
Successful candidates	18	0	3	0	7	2	6				
Unsuccessful candidates	150	3	10	6	39	45	47				
<u>College - Incomplete</u>											
Successful candidates	70	2	12	10	26	9	11				
Unsuccessful candidates	167	39	7	20	40	19	42				
<u>Technical Accounting School</u>											
Successful candidates	49	3	7	4	11	19	5				
Unsuccessful candidates	189	13	10	11	52	46	57				
<u>College Graduate (See Breakdown)</u>											
Successful candidates	229	12	27	73	78	22	17				
Unsuccessful candidates	595	48	47	161	171	71	97				
<u>Total Candidates</u>											
Successful candidates	366	17	49	87	122	52	39				
Unsuccessful candidates	1101	103	74	198	302	181	243				
<u>DETAIL OF COLLEGE GRADUATE GROUP</u>											
<u>Not Accounting Major</u>											
Successful candidates	117	9	17	41	30	11	9				
Unsuccessful candidates	271	33	25	50	73	35	55				
<u>Accounting Major</u>											
Successful candidates	96	2	7	28	41	11	7				
Unsuccessful candidates	288	15	22	95	90	26	40				
<u>Graduate School</u>											
Successful candidates	16	1	3	4	7	0	1				
Unsuccessful candidates	36	0	0	16	8	10	2				

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

(SAMPLES FROM NOVEMBER, 1948 EXAMINATION)

EDUCATION	Percent Group is of Total of Sample	EXPERIENCE						Total
		No Experience		Non- Public		PUBLIC		
		1-2 yrs.	2-4 yrs.	4-6 yrs.	Over 6 yrs.	1-2 yrs.	Over 6 yrs.	
		<u>SUCCESSFUL CANDIDATES</u>						
High School Only	4.9	--	16.7	--	38.9	11.1	33.3	100.0
College - Incomplete	19.1	2.9	17.1	14.3	37.1	12.9	15.7	100.0
Technical Accounting School	13.4	6.1	14.3	8.2	22.4	38.8	10.2	100.0
College Graduate	62.6	5.2	11.8	31.9	34.1	9.6	7.4	100.0
Total	100.0	4.6	13.4	23.8	33.3	14.2	10.7	100.0
		<u>UNSUCCESSFUL CANDIDATES</u>						
High School Only	13.6	2.0	6.7	4.0	26.0	30.0	31.3	100.0
College - Incomplete	15.2	23.4	4.2	12.0	23.9	11.4	25.1	100.0
Technical Accounting School	17.2	6.9	5.3	5.8	27.5	24.3	30.2	100.0
College Graduate	54.0	8.1	7.9	27.1	28.7	11.9	16.3	100.0
Total	100.0	9.4	6.7	18.0	27.4	16.4	22.1	100.0

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

(SAMPLE FROM NOVEMBER, 1948 EXAMINATION)

CLASSIFIED AS TO EDUCATION	NUMBER OF CANDIDATES THAT HAVE COMPLETED THEIR					Total	
	First Attempt	Second Attempt	Third Attempt	Fourth Attempt	Fifth Attempt		More Than Fifth Attempt
High School Only	56	28	25	11	13	17	150
College - Incomplete	64	55	18	15	3	12	167
Technical Accounting School	72	41	22	27	10	17	189
College Graduate - Non-Major	91	79	39	37	16	9	271
College Graduate - Acctg. Major	149	60	33	19	10	17	288
Graduate School	17	6	6	3	0	4	36
TOTAL	449	269	143	112	52	76	1101
	<u>PERCENTAGES</u>						
High School Only	37.3	18.7	16.7	7.3	8.7	11.3	100.0
College - Incomplete	38.3	32.9	10.8	9.0	1.8	7.2	100.0
Technical Accounting School	38.1	21.7	11.6	14.3	5.3	9.0	100.0
College Graduate - Non-Major	33.6	29.2	14.4	13.6	5.9	3.3	100.0
College Graduate - Acctg. Major	51.7	20.8	11.5	6.6	3.5	5.9	100.0
Graduate School	47.2	16.7	16.7	8.3	--	11.1	100.0
TOTAL	40.8	24.4	13.0	10.2	4.7	6.9	100.0

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

(SAMPLE FROM NOVEMBER, 1948 EXAMINATION)

CLASSIFIED AS TO EXPERIENCE	NUMBER OF CANDIDATES THAT HAVE COMPLETED THEIR					Total	
	First Attempt	Second Attempt	Third Attempt	Fourth Attempt	Fifth Attempt		More Than Fifth Attempt
No Experience	46	45	6	5	1	0	103
Non-Public Experience	30	18	8	6	6	6	74
Public, 1-2 years	114	43	30	5	5	1	198
Public, 2-4 years	147	82	30	18	10	15	302
Public, 4-6 years	57	40	33	27	11	13	181
Public, over 6 years	55	41	36	51	19	41	243
TOTAL	449	269	143	112	52	76	1101
	PERCENTAGES						
No Experience	44.7	43.7	5.8	4.8	1.0	--	100.0
Non-Public Experience	40.6	24.3	10.8	8.1	8.1	8.1	100.0
Public, 1-2 years	57.6	21.7	15.2	2.5	2.5	.5	100.0
Public, 2-4 years	48.7	27.1	9.9	6.0	3.3	5.0	100.0
Public, 4-6 years	31.5	22.1	18.2	14.9	6.1	7.2	100.0
Public, Over 6 years	22.6	16.9	14.8	21.0	7.8	16.9	100.0
TOTAL	40.8	24.4	13.0	10.2	4.7	6.9	100.0

DATA ON UNSUCCESSFUL CANDIDATES
 SHOWING THE NUMBER THAT HAVE PASSED AND FAILED EACH SUBJECT
 CLASSIFIED AS TO EDUCATION AND AS TO EXPERIENCE

(SAMPLE FROM NOVEMBER, 1948 EXAMINATION)

SUBJECT	CLASSIFIED AS TO EDUCATION							Total
	High School Only	College Incomplete	Technical		Non-Major	COLLEGE GRADUATES		
			Accounting School			Major	Graduate School	
<u>Auditing:</u>								
Candidates that passed	40	47	61	84	84	17	333	
Candidates that did not pass	110	120	128	187	204	19	768	
Percent of passed to total	26.7	28.1	32.3	31.0	29.2	47.2	30.3	
<u>Commercial Law:</u>								
Candidates that passed	58	98	87	160	149	25	577	
Candidates that did not pass	92	69	102	111	139	11	524	
Percent of passed to total	38.7	58.7	46.0	59.0	51.7	69.4	52.4	
<u>Theory of Accounts:</u>								
Candidates that passed	49	39	57	91	95	19	350	
Candidates that did not pass	101	128	132	180	193	17	751	
Percent of passed to total	32.7	23.4	30.2	33.6	33.0	52.8	31.8	
<u>Accounting Practice:</u>								
Candidates that passed	26	35	42	64	137	6	310	
Candidates that did not pass	124	132	147	207	151	30	791	
Percent of passed to total	17.3	21.0	22.2	23.6	47.6	16.7	28.2	

DATA ON UNSUCCESSFUL CANDIDATES
SHOWING THE NUMBER THAT HAVE PASSED AND FAILED EACH SUBJECT
CLASSIFIED AS TO EDUCATION AND AS TO EXPERIENCE

(SAMPLE FROM NOVEMBER, 1948 EXAMINATION)

SUBJECT	CLASSIFIED AS TO EXPERIENCE						Total
	No Experience	Non-Public		Public		Over 6 yrs.	
		1-2 yrs.	2-4 yrs.	4-6 yrs.	Over 6 yrs.		
<u>Auditing:</u>							
Candidates that passed	15	17	47	97	69	88	333
Candidates that did not pass	88	57	151	205	112	155	768
Percent of passed to total	14.6	23.0	23.7	32.1	38.1	36.2	30.3
<u>Commercial Law:</u>							
Candidates that passed	54	38	94	159	98	134	577
Candidates that did not pass	49	36	104	143	83	109	524
Percent of passed to total	52.4	51.4	47.5	52.6	54.1	55.1	52.4
<u>Theory of Accounts:</u>							
Candidates that passed	21	17	42	95	71	104	350
Candidates that did not pass	82	57	156	207	110	139	751
Percent of passed to total	20.4	23.0	21.2	31.4	39.2	42.8	31.8
<u>Accounting Practice:</u>							
Candidates that passed	28	14	95	83	38	52	310
Candidates that did not pass	75	60	103	219	143	191	791
Percent of passed to total	27.2	19.0	48.0	27.5	21.0	21.4	28.2

UNSUCCESSFUL CANDIDATES CLASSIFIED AS TO
AGE AND EXPERIENCE

(SAMPLE FROM NOVEMBER, 1948 EXAMINATION)

<u>AGE</u>	<u>EXPERIENCE</u>						<u>Total</u>	
	<u>No Experience</u>	<u>Non- Public</u>	<u>PUBLIC</u>					
			<u>1-2 yrs.</u>	<u>2-4 yrs.</u>	<u>4-6 yrs.</u>	<u>Over 6 yrs.</u>		
			<u>NUMBER OF CANDIDATES</u>					
Under 25	27	7	26	9	2	0	71	
25 - 29	53	26	112	113	36	20	360	
30 - 34	13	17	42	103	70	44	289	
35 - 39	6	8	11	45	26	66	162	
40 - 44	1	9	4	21	26	61	122	
45 - 49	0	2	3	7	14	28	54	
50 and over	3	5	0	4	7	24	43	
Total	<u>103</u>	<u>74</u>	<u>198</u>	<u>302</u>	<u>181</u>	<u>243</u>	<u>1,101</u>	
			<u>PERCENTAGE OF EXPERIENCE TOTALS</u>					
Under 25	26.2	9.5	13.1	3.0	1.1	-	6.4	
25 - 29	51.5	35.1	56.6	37.4	19.9	8.2	32.7	
30 - 34	12.6	23.0	21.2	34.1	38.7	18.1	26.3	
35 - 39	5.8	10.8	5.6	14.9	14.4	27.2	14.7	
40 - 44	1.0	12.2	2.0	7.0	14.4	25.1	11.1	
45 - 49	-	2.7	1.5	2.3	7.7	11.5	4.9	
50 and over	2.9	6.7	-	1.3	3.8	9.9	3.9	
Total	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	
			<u>PERCENTAGE OF AGE TOTALS</u>					
Under 25	38.0	9.9	36.6	12.7	2.8	-	100.0	
25 - 29	14.7	7.2	31.1	31.4	10.0	5.6	100.0	
30 - 34	4.5	5.9	14.5	35.7	24.2	15.2	100.0	
35 - 39	3.7	4.9	6.8	27.8	16.1	40.7	100.0	
40 - 44	.8	7.4	3.3	17.2	21.3	50.0	100.0	
45 - 49	-	3.7	5.6	12.9	25.9	51.9	100.0	
50 and over	7.0	11.6	-	9.3	16.3	55.8	100.0	
Total	<u>9.4</u>	<u>6.7</u>	<u>18.0</u>	<u>27.4</u>	<u>16.4</u>	<u>22.1</u>	<u>100.0</u>	

THEORETICAL EFFECT OF INCREASE IN NUMBER OF CANDIDATES

Date	Approximate Number of Candidates	Number Finally Passing	From This Examinee	From Prior Examinations					Total	Percent of Candidates Passing
				1st	2nd	3rd	4th	Earlier		
May, 1945	1,550	775	248	279	116	54	31	47	775	50
Nov., 1945	2,150	1,075	344	279	116	54	31	47	871	40
May, 1946	3,950	1,975	632	387	116	54	31	47	1,267	32
Nov., 1946	5,500	2,750	880	711	161	54	31	47	1,884	34
May, 1947	6,200	3,100	992	990	296	75	31	47	2,431	39
Nov., 1947	7,500	3,750	1,200	1,116	413	138	43	47	2,957	40
May, 1948	8,400	4,200	1,344	1,350	465	192	79	65	3,495	41
Nov., 1948	11,200	5,600	1,792	1,512	563	217	110	119	4,313	38

The assumption has been made that 50% of all candidates finally pass. The percentage which pass their first, second, third, etc. attempt is based on Schedule II. It will be noted that the greater the rate of increase, the lower is the percentage of candidates passing the examination. This actual condition as to increase in the number of candidates has prevailed from May, 1945 up until the present time. If a point of stability is reached, the percent of passing candidates will gradually increase until the fifth examination is reached, after which it should theoretically stabilize.

Schedule VII

COMPARISON OF THE EDUCATION AND EXPERIENCE OF CANDIDATES PASSING EACH SUBJECT AS SHOWN BY A SAMPLE FROM THE NOVEMBER, 1946 STUDY AND AS SHOWN BY THE SAMPLES FROM THE NOVEMBER, 1948 STUDY. ALL DATA REDUCED TO PERCENTAGES

	AUDITING		COMMERCIAL LAW		THEORY OF ACCOUNTS		ACCOUNTING PRACTICE	
	Nov. 1946 (1)	Nov. 1948 (2)	Nov. 1946	Nov. 1948	Nov. 1946	Nov. 1948	Nov. 1946	Nov. 1948
EDUCATION								
High School Only	7.1	8.3	6.2	8.1	7.3	9.4	5.6	6.5
College Incomplete	22.0	16.7	20.1	17.8	20.2	15.2	18.8	15.5
Technical Accounting School	19.4	15.7	23.5	14.4	23.4	14.8	26.3	13.5
College Graduate - Not Major	20.3	28.8	19.0	29.4	19.6	29.0	18.4	26.7
College Graduate - Major	26.0	25.8	26.3	26.0	25.4	26.7	26.3	34.5
Graduate School	5.2	4.7	4.9	4.3	4.1	4.9	4.6	3.3
Total	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

EXPERIENCE

None	3.2	4.6	3.9	7.5	3.8	5.3	2.6	6.7
Non-Public	37.4	9.4	35.4	9.2	34.7	9.2	41.7	9.3
Public, 1 - 2 years	12.4	19.2	14.9	19.2	13.8	18.0	10.2	26.9
Public, 2 - 4 years	21.1	31.3	21.8	29.8	21.7	30.3	19.6	30.3
Public, 4 - 6 years	12.3	17.3	12.6	15.9	13.7	17.2	15.1	13.3
Public, Over 6 years	13.6	18.2	11.4	18.4	12.3	20.0	10.8	13.5
Total	<u>100.0</u>							

NOTES:

(1) These percentages are based on data reported in "Challenges to the Accounting Profession 1947" published by the American Institute of Accountants. The figures are for candidates who passed the subject in November, 1946 in contrast with the November, 1948 figures which include all candidates who were credited with having passed the subject on the November, 1948 examination or on prior examinations. The 1948 figures give cumulative effect to past examinations, while the 1946 figures do not include such cumulative credit.

(2) These percentages are the result of using the figures for the 366 successful candidates as reported in Schedule Ia and Ib combined with the figures in Schedules IIIa and IIIb.