

University of Mississippi

eGrove

---

AICPA Committees

American Institute of Certified Public Accountants (AICPA) Historical Collection

---

1963

## Accounting education: summaries of five seminars held in 1961-62, a questionnaire on accounting education prepared in 1963, summaries of responses to the questionnaire

American Institute of Certified Public Accountants. Committee on Relations with Universities

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 Certified Public Accountants. Committee on Relations with Universities, "Accounting education: summaries of five seminars held in 1961-62, a questionnaire on accounting education prepared in 1963, summaries of responses to the questionnaire" (1963). *AICPA Committees*. 316. [https://egrove.olemiss.edu/aicpa\\_comm/316](https://egrove.olemiss.edu/aicpa_comm/316)

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).

# *Accounting Education*

---

Summaries of five seminars held in 1961-62

---

A questionnaire on accounting education prepared in 1963

---

Summaries of responses to the questionnaire

# *Accounting Education*

Summaries of five seminars held in 1961-62

A questionnaire on accounting education prepared in 1963

Summaries of responses to the questionnaire

Copyright 1963 by the  
American Institute of Certified Public Accountants, Inc.  
666 Fifth Avenue, New York, New York 10019

# Table of Contents

---

## **The Seminar Summaries**

**Columbia University**

PAGE 8

**University of Chicago**

PAGE 20

**Emory University**

PAGE 28

**Stanford University**

PAGE 36

**University of Texas**

PAGE 44

## **The Questionnaire**

PAGE 57

## **Responses to the Questionnaire**

PAGE 66



# Preface

---

The committee on relations with universities was created in 1959 because of the deep interest of the leaders of the Institute in accounting education—its teachers, curriculums, and students. The committee's interests include student and faculty internships and fellowships, policies for the formulation of accounting cases, recruiting, tests for accounting personnel, accreditation of accounting curriculums, and a variety of other matters that affect the direction that accounting education will take.

In December 1960 the Graduate School of Industrial Administration at Carnegie Institute of Technology convened a conference on accounting education.\* Here leading accounting practitioners and educators discussed the "future" of accounting education. The conference was so thought-provoking that the committee on relations with universities selected its pattern as a major activity for 1961 and 1962. Five seminars were held at five widely separated universities, and the summaries of those meetings form the backbone of this publication.

No votes were taken at the seminars, and the summaries necessarily represent opinions and impressions of the discussions. The committee decided that it would be beneficial to readers if objective indications of the thinking of those who attended the seminars (including the Carnegie Tech seminar) could be obtained. Accordingly, in the spring of 1963 the participants in all six of the conferences were sent the questionnaire that is reproduced herein. Seventy-five different persons attended the conferences, and replies were received from sixty-five. Some of the participants did not answer it because of their positions

\*See *The Future of Accounting Education*, Graduate School of Industrial Administration, Carnegie Institute of Technology. This is a collection of papers resulting from the Conference.

(e.g., the staff members of AICPA); the high proportion of responses is a remarkable indication of the interest in and the importance attached to the subject.

Respondents to the questionnaire were invited to comment, and many did so. The committee was tempted to try to supplement the statistical summaries of responses to the questionnaire with an "article" utilizing the comments, but in the end it decided that any such article would necessarily bear the biases of the preparers and probably would not transmit the flavor of the responses. Accordingly, the committee can do no more than express its thanks to those who took the time not only to check the questionnaire's answer spaces but to comment.

Special thanks are due to members of the committee who served as the chairmen of the conferences, Professors Robert I. Dickey, Sidney Davidson, C. Aubrey Smith, and Oswald Nielsen, and Mr. John R. Jones, as well as to the deans and accounting faculties of the following schools at which the conferences were held:

Graduate School of Business, The University of Chicago  
Graduate School of Business, Columbia University  
School of Business Administration, Emory University  
Graduate School of Business, Stanford University  
College of Business Administration, The University of Texas

The committee hopes by this publication to make available to practitioners and educators all over the country the benefits that participants in the seminars received from thinking and hearing the thoughts of others about the direction that accounting education should take in the future.

#### 1962-63 COMMITTEE ON RELATIONS WITH UNIVERSITIES

HARRY C. ZUG, *Chairman*

WILTON T. ANDERSON	CHARLES JOHNSON
JAMES O. ASH	JOHN R. JONES
NEIL CHURCHILL	OSWALD NIELSEN
CARSON COX	GARLAND CHESTER OWENS
DONALD H. CRAMER	C. AUBREY SMITH
SIDNEY DAVIDSON	DAVID W. THOMPSON
JOHN H. HANOVER	LAWRENCE M. WALSH
GEORGE H. HANSEN	HAROLD J. WOLOSIN
LEO HERBERT	RICHARD S. WOODS



# The Seminar Summaries

---

# Columbia University

---

*May 12, 1961*

## PARTICIPANTS

- PROF. ROBERT I. DICKEY, *Chairman*, University of Illinois, Urbana  
PROF. CHARLES W. BASTABLE, JR., Columbia University, New York  
DEAN COURTNEY C. BROWN, Columbia University, New York  
MR. JOHN L. CAREY, American Institute of Certified Public Accountants, New York  
MR. DONALD CRAMER, Touche, Ross, Bailey & Smart, New York  
MR. GEORGE H. HANSEN, McGladrey, Hansen, Dunn & Company, Davenport  
MR. SAMUEL LEOPOLD, Samuel Leopold & Co., Trenton  
MR. EDWARD S. LYNN, American Institute of Certified Public Accountants, New York  
MR. ELLSWORTH H. MORSE, JR., Office of the Controller General, Washington  
PROF. MARY E. MURPHY, Los Angeles State College, Los Angeles  
MR. H. G. NELSON, Ford Motor Co., Dearborn  
PROF. GARLAND CHESTER OWENS, Columbia University, New York  
MR. LEONARD PRICE, Klein, Hinds & Finke, New York  
PROF. ALBERT I. RAIZMAN, Duquesne University, Pittsburgh  
MR. ROBERT L. STEELE, Haskins & Sells, New York

## *Introduction*

The chairman of the seminar pointed out that the accounting profession has a continuing need for self-criticism and self-appraisal and is to be congratulated for the efforts it has already made in this direction. He then summarized the educational aspects of the *Report of the Commission on Standards of Education and Experience for CPAs* and of the *Report to Council* of the Bailey Committee (a special committee of the AICPA appointed to consider the commission's report). The editorial for the June 1961 issue of *The Journal of Accountancy* was read to the group. It emphasized two possible objectives of accounting education, (1) to educate students to *be* accountants or (2) to educate them to be able to *become* accountants, and observes that it may be desirable to adopt both objectives.

The influence of the recent studies of the education of businessmen<sup>1</sup> was pointed out, together with the fact that they have appeared since the reports of the commission and Bailey committee referred to above.

### *The accountant's job in the years ahead*

The group discussed the three major areas of the accountant's work: auditing, tax services and management services. Little attention was given to tax services. There seemed to be general agreement that the proportion of the accountant's time devoted to management services may be expected to increase. The CPA must be prepared to offer management services if he is to maintain and improve his professional status.

#### *Auditing*

Several participants presented auditing as the major contribution of the CPA to society and the activity which contributes most to his

<sup>1</sup>Frank C. Pierson and Others, *The Education of American Businessmen*, (New York, McGraw-Hill Book Company, Inc., 1959) ("The Carnegie Report").

Robert Aaron Gordon and James Edwin Howell, *Higher Education for Business*, (New York, Columbia University Press, 1959) ("The Ford Report").

status in the business world. It was felt that in the years ahead this function will be increasingly important. It was expected that the trend toward auditing the accounting system rather than the audit of individual transactions will probably continue.

There was a consensus that statistical sampling and electronics will be increasingly important to the auditor. Both can be expected to be important tools of auditing as well as essential elements in the effective operation of substantial businesses.

As the size of businesses increases and as techniques of accounting and auditing improve, the auditor will tend to place greater and greater reliance on internal control. As a result there will be much less examination of individual transactions, and there will be a greater application of high-level judgment, based on experience, to the audit of whole systems. This result, already evident to some degree, poses a problem in the development of the senior accountants capable of exercising such judgment; that is to say, the volume of auditing activity capable of being performed by "juniors and semi-seniors" may not be sufficient to provide a training ground for the type of auditor most in demand. This shift in the nature of auditing work will require appropriate changes in the type of education and training to be given young accountants.

An investor's evaluation of a company would ideally be based on a study of the financial statements and an appraisal of the management's activities in directing the activities of the company. Some boards of directors and stockholder groups now ask the auditor for the latter. Whether the management audit and evaluation of the future will be done by CPAs or by others is not yet determined. If the management audit is to be performed by the CPA, he must have a breadth of education and experience comparable to those of the best of the business executives. Another basic requirement for the management audit is the development of standards of management which are sufficiently definite to be used by independent auditors in making reviews of management activities.

The skills of a CPA of the future will require a basic technical competence and he will branch out from this knowledge into other areas or services. One source, perhaps the primary source, of management consultants will be accountants with outstanding technical competence.

### *Management services*

An essential part of a financial audit is a "proper study and evaluation of internal control," and the AICPA has defined internal control

quite broadly. Therefore, knowledge necessary for the evaluation of internal control is in many cases the knowledge necessary to perform management services.

Management service engagements are typically derived from audit engagements and are benefited by the auditor's intimate knowledge of the client's operations. Auditors should be trained to identify problem areas and to call them to the attention of supervisors and the client. In the larger firms management service specialists are called in to participate in the development of solutions, whereas the smaller practitioner cannot, for economic reasons, so separate the functions of his staff. The trend to development of "management consultant" personnel in accounting firms may be expected to continue and it is to be hoped that the profession will develop ways for the smaller practitioner to increase his own skills and have consultative access, when necessary, to the benefits of specialization.

The ultimate in service to management will be what one participant called "entrepreneur counseling." This consists of consulting with the client regarding his personal economic goals; the goals of the business; its policies and the decision-making, co-ordination and control techniques suitable to attain the goals.

Failure of the CPA to progress in the area of management consulting would create client dissatisfaction and reliance upon consultants other than CPAs; such loss of client confidence would lower the prestige of the profession.

### *Governmental accounting and auditing*

It was pointed out that top-level Governmental accounting and auditing is moving in the same direction as is public accounting; in some aspects the rate of change may be greater. For example, Governmental auditors in some cases do evaluate management performance as a regular part of their auditing function. Many Governmental accounting organizations are cognizant of the need of attracting qualified students to the study of accountancy, establishing appropriate accounting curricula and providing staff training.

### *Types of accountants needed*

The question was raised as to whether the foregoing discussion of the future of public accounting indicates a need for two types of accountants. One would be the broadly trained, broad-gauged businessman-public accountant-management consultant, while the other was described as an accounting technician. Some participants took the position that

there will be a need for these two types, while others felt that the skills of the CPA require technical competence and that he starts from this point to develop the skills and experience described for the first type of accountant. In this connection it was pointed out that there is a belief on the part of many accountants, both practitioners and educators, that the accountant should be a skilled businessman as well as a competent accountant.

### *Intellectual preparation for tomorrow's work*

The examination of the statements of a complex modern business requires an intensive education in the information and control techniques used at the present time. As the complexities and size of our economy increase, so must the auditor's knowledge of our economy increase. As the applications of mathematics and electronic data processing to the operation of a business increase, so must the auditor's knowledge of these techniques increase. If the accountant is to examine and report upon management activities he requires the broadest kind of education, experience, and outlook. As stated earlier, many of the participants felt that he must be first a businessman and second an accountant.

The small business of the future will tend to use more and more of the advanced techniques which are available, and it is certainly entitled to the same management services skills from its CPAs as is the larger firm. Many of the accountants now serving these small and medium-sized businesses are not knowledgeable in such areas as electronic data processing, budgeting, statistical sampling, and the like.

### *Goals*

Certain facts of educational life seem to be important. Four-year programs are the rule now and it appears unlikely that they will go out of existence in the near future. Similarly there is a wide variety in the qualities of institutions and faculties which are offering accounting education. The existence of divergencies in quality, together with the analysis which suggests that there will be a continuing need for technicians in accounting as compared to broad-gauge accountants equipped to consult on the highest levels of business policy, caused some participants to feel that schools should adopt different goals. Graduate schools tend to get gifted students and should plan the education of the broad-gauged accountant. Consideration of time, family, and finances

will keep many outstanding students from getting the highest type of professional education offered by the graduate schools. The appropriate education in business at the graduate level was described as consisting of mathematics and behavioral sciences (particularly their uses), macroeconomics, microeconomics, business institutions, and specialization. Although the desirability of graduate work is acknowledged, educators are confronted with a great demand for technically trained accountants who have completed four years of training. Unfortunately many CPA practitioners contribute to this demand because they believe that four years' education is enough for junior accountants. In view of this continuing demand and the awareness that only specially gifted students should go into graduate work, the four-year undergraduate programs will continue to be offered for many more years.

### *Education and the CPA examination*

There was some discussion of accounting education in its relation to the CPA examination. Some participants felt that lowering the amount of accounting lowers the chance of success on the CPA examination. Other participants responded to this by pointing out that the profession might take over specific training for the examination or that the nature of the examination could be changed if the meaning of the CPA certificate were changed. Others pointed out that the intensification of accounting courses has caused more material to be offered in each course and that there was a resulting condensation and combination of courses to provide the same amount and quality of accounting education in the reduced time. The increasingly effective use of existing or reduced total hours of accounting study may overcome the apparent reduction in the amount of accounting study.

The problem of state specification of accounting hours and courses was mentioned. The aforementioned condensation of accounting materials makes it difficult for some candidates to meet state requirements for sitting for the CPA examination, yet state requirements remain unchanged. It was pointed out that the quantitative assessment of education by state boards overlooks the quality of education, yet quantity seems to be the only objective criterion available. Several participants thought that schools should be evaluated according to success of candidates on the CPA examination. Other participants pointed out that success of graduates on the CPA examination is at best a minimum standard for first-class accounting programs.

### *Education and the organized profession*

The function of the organized profession in accreditation of schools and in educational policy was briefly discussed. It was pointed out that

accountants are far behind the legal and medical profession in specification of education for the profession. Perhaps the profession and professional organizations should talk of educational standards, levels of achievement, and relationship of the standards to the requirements of public accounting rather than the specification of hours to be devoted to various subjects. Professors are experts in the matter of selection of means and allocations of resources to achieve standards, and they may properly be resentful of any invasion of their professional area.

### *Arts and sciences*

The desirability of having liberal arts courses as part of the educational requirements of accountants was acknowledged. The weight of such courses in the total curriculum is to be settled. It was suggested that more courses must be developed in the liberal arts that are shaped for the needs of the accounting student.

The specific question "Should future accountants be trained in behavioral sciences and mathematics?" was discussed by participants. Several felt that the group could not arrive at a definite answer because the extent of study necessary depends upon the type of work which the accountant will do. Several suggested that accountants should have a knowledge of these fields but should not have the depth required of experts in those areas. It was also pointed out that specific courses shaped for the needs of accountants, or at least the needs of business students, would probably have to be developed because the basic courses in those areas are, in general, prerequisites for majors and not fully satisfactory for accountants.

### *Indecision of accounting students*

One participant felt that a major problem of educators was that the accounting student does not know whether he will be a public accountant or industrial accountant until he takes his first job. He felt that the course for public accountants should be tailored to the needs of public accounting. Others felt that the broad education which has been described above is necessary for the accountant whether he is going to be in industry or Government or public accounting.

### *Common body of knowledge*

The difficulties encountered in discussing the intellectual preparation needed by the accountant to do tomorrow's work might have been reduced if the discussion could have been based on a definition of the specialized knowledge he will require. It appears, therefore, that the



first step in establishing an accounting curriculum is a description of the *common body of knowledge* that should be possessed by members of the accounting profession.

A description of the common body of knowledge will assist in defining the appropriate intellectual preparation, the development of undergraduate and postgraduate programs, the definition of appropriate areas to be covered by the Uniform CPA Examination, and the identification of the contributions of "continuing education" and of experience to the development of the CPA.

The executive committee of the Institute is now considering the feasibility of a study to describe this common body of knowledge. Such a study might approach the magnitude of the work of the Commission on Standards of Education and Experience for CPAs and, therefore, involves important questions such as who will make the study and the techniques to be used.

### *Ford and Carnegie reports*

There seemed to be a general feeling in the group that the Ford and Carnegie reports are not inconsistent with the bulk of the opinions expressed above insofar as the broad-gauge accountant is concerned.

There was considerable criticism of the reports on the following bases:

1. The reports made the assumption that a course in liberal arts is a broadening experience which tends to develop analytical ability on the part of the student and that a course in business requires the students to memorize techniques or institutional facts.
2. Many liberal arts courses are taught in an illiberal manner. Courses for majors in liberal arts areas may be very narrow and technical.

It was emphasized that the important thing is how the course is taught. If a teacher teaches by rote, the student learns little whether he is taking a liberal arts course or a business course. If a business course or an accounting course is taught in the liberal tradition, by analyzing the reasons for procedures and the management applications of procedures and results, it can be as effective in developing the ability to think as a well-taught liberal arts course.

Reservation of professional training to the graduate school, as suggested by the reports, was accepted as the objective toward which the

profession should move. It was recognized that many practitioners believe that four years is enough for junior accountants, and it was also recognized that many candidates find that family and monetary considerations make the fifth year hard to attain.

### *Interrelation of accounting, statistics and mathematics*

There seemed to be substantial agreement that statistics and mathematics should be included in the background of the accountant in such form that he can make appropriate use of them. Accounting curricula have included statistics courses for the last generation, but few accountants have adapted statistical techniques to accounting problems. Few accountants have been exposed to substantial concentrations in mathematics.

There seemed to be general agreement that knowledge in the three fields should be interrelated and that the educational process should provide for such interrelation; the general feeling expressed seemed to be that it should be attempted at the secondary level rather than in the basic courses. Some felt that it should be reserved for the seminar level in graduate programs, but others felt strongly that it could occur earlier. It was pointed out that a good many schools are attempting to teach the interrelationship in the basic courses. Reported results are meager, as are published course materials.

At least one participant felt that the need was for "integrated" professors rather than for "integrated" courses. By this he meant that the professors would need to have knowledge of the several fields and use those fields in classroom work. It was pointed out that many colleges and universities are encouraging and assisting their professors to study behavioral sciences and mathematics in an attempt to develop this type of integration.

It was pointed out that statistical sampling is of growing importance, yet the CPA does not need to know the derivation of all of the formulas to be able to apply the tools to his situations. Others supported this view that the knowledge of statistics and mathematics does not have to be in depth. One participant likened the accountant's knowledge of statistics to his knowledge of business law. He should be equipped to recognize that a problem exists and should be equipped to understand the conclusions reached by the experts to whom the problem is referred. However, the following seems to be more nearly a generalization which was acceptable to the group: the accountant need not be a specialist in

mathematics or behavioral sciences, but he must understand a subject rather thoroughly to justify his use of it in practice.

The question was raised as to whether the current enthusiasm about the value of mathematics in the solution of business problems might not be a passing fad. The computer has aided in the applications of mathematics to business problems but has limitations in terms of problem solving.

Another participant pointed out that larger firms of CPAs are able to divide their work so that a few can specialize and can be available for referral purposes to other members of the firm. Small firms are not likely to have this referral opportunity within the firm, and therefore their men might need broader knowledge than do the employees and partners of a national firm.

### *The universities' part in the education of accountants*

The complete process of education of an accountant includes contributions from the university, staff training programs, on-the-job training, experience, and personal study. It was pointed out that there is some feeling that some of the education in accounting should be shifted from the universities to the organized profession, the firm, or to the individual himself. Specific areas which might be moved out of the university included (1) techniques and applications and (2) accounting specialty subjects.

There was general agreement that the universities should have the responsibility for the accountant's education in arts and sciences, mathematics, and principles of its application to decision making, the behavioral sciences, economics, an introduction to the business and economic environment, and principles of accounting. The agreement seemed to be based on acceptance of the criterion that those subjects which are basic to future learning ("building blocks" for continuing education and self-education) should be taught in the universities.

There was considerable feeling that teaching of accounting courses should be confined to the principles; applications and techniques should become the responsibility of the profession. For example, auditing principles might be taught in a short course if the profession were charged with the responsibility of teaching the implementation of the principles. Principles of Federal taxation and public finance might well be included in the curriculum, but no return preparation might be required at the college level. Concern was expressed that the teaching of prin-

ciples without illustrative applications and techniques would be poor pedagogy. There seemed to be a consensus that teaching of techniques and applications might properly be restricted to the amount necessary to illustrate and clarify the principles and implant them in the minds of the students.

There was some discussion as to whether the teaching of special subjects should be provided in the universities. Such areas as fund accounting, fiduciary accounting, accounting for bankruptcy situations, consolidations, foreign exchange, brokerage accounting and the like could be reserved for continuing education courses, correspondence courses or other types of home study.

Considerable doubt was expressed as to the advisability of reducing the role of the universities in accounting education. It was pointed out that the universities can do an excellent job of teaching specialties, and even in the areas of techniques and applications of principles may be able to do a much better job than the typical practitioner. If there is a substantial postponement of accounting education to practice, pressures of work may prevent the education from being completed. At best it may be completed in a rather spotty and nonuniform manner if left in the hands of the individual employers. Some practitioners would be unable or unwilling to educate their junior accountants. If the university is not going to do the job, then the organized profession must be relied upon either through continuing education or correspondence courses.

### *Differences in education for accountants*

It was observed that at the present time universities are in general agreement that courses for industrial, Governmental, and public accounting should be essentially the same. Even in cases where separate curricula have been outlined, the details are not substantially different. It was observed that the existing professional school at Rutgers University, though intended primarily for public accounting, basically trains its graduates for all aspects of accounting.

An understanding of business enterprises and of managerial accounting activities is required by CPAs both for their audit activities and for the rendering of management services. Especially if the broadened concept of public accounting is accepted, there seems to be reason to believe that the basic education should be similar.

At the present time many students of accounting do not know whether

they intend to go into Governmental, industrial, or public accounting. To force them to make a choice at an early point in their careers might be doing them a disservice. In addition, there seemed to be general agreement among the participants that the type of education to be given in preparation for careers in the three areas should be essentially the same. (A course in how to administer a practice is a public accounting specialty, of course. However, many of the participants felt that such a course is not suitable for a college curriculum.)

## *Subject areas for the Uniform CPA Examination*

### *Common body of knowledge*

The appropriate areas to be covered by the Uniform CPA Examination should comprise all aspects of the common body of specialized knowledge of the accounting profession including management services and income taxes. Because the common body of knowledge has not been defined, the propriety and intensity of certain subject areas such as commercial law and, as has been suggested, economics and finance, remains undecided. The present composition of the examination seems to have the proper comprehensiveness and balance.

### *Relation to teaching*

The question was raised as to whether the coverage of the CPA examination leads university teaching or lags behind in exploring new accounting areas. Probably the examination and teaching progress together. Should the examination lead the universities, the candidates would be unable to reply to the questions and their answers would not be gradable. New subjects are introduced by questions which are relatively simple and short and which may be used as alternates. Use of a subject on the examination undoubtedly causes some universities to include the subject in their curricula. On the other hand, the subject matter for examination questions is taken from current literature and the latest textbooks, and in this way the examination stays abreast of the materials generally being taught to candidates.

# University of Chicago

---

*April 6, 1962*

## **PARTICIPANTS**

**PROF. SIDNEY DAVIDSON**, *Chairman*, University of Chicago, Chicago

**MR. JOHN L. CAREY**, American Institute of Certified Public Accountants, New York

**MR. RICHARD S. CLAIRE**, Arthur Andersen & Company, Chicago

**PROF. ROBERT I. DICKEY**, University of Illinois, Urbana

**MR. KEITH W. DUNN**, McGladrey, Hansen, Dunn & Company, Cedar Rapids, Iowa

**MR. ALEXANDER EULENBERG**, David Himmelblau & Company, Chicago

**PROF. WALTER F. FRESE**, Harvard University, Boston

**PROF. CHARLES J. GAA**, Michigan State University, East Lansing

**MR. E. L. GALLOWAY**, Butler Brothers, Chicago

**DEAN JAMES R. MCCOY**, Ohio State University, Columbus

**PROF. CARL NELSON**, University of Minnesota, Minneapolis

**MR. ROBERT M. TRUEBLOOD**, Touche, Ross, Bailey and Smart, Chicago

**MR. HARRY C. ZUG**, Lybrand, Ross Brothers & Montgomery, Philadelphia

## *Introduction*

The general objective of the seminar was to define the future educational needs of the professional accountant. By first defining these needs, the group felt the major problems of accounting education might then be specified. This statement of the problems of accounting education could in turn be used as a basis for exploring possible solutions.

It was felt that it would be necessary to limit the discussion to the educational needs of the professional accountant. The Gordon-Howell definition of a profession, "the practice of a profession must rest on a systematic body of knowledge of substantial intellectual content and on the development of personal skill in the application of this knowledge to specific cases," was accepted as a basis for circumscribing the field of professional accounting. Although much of the later discussion can be viewed as an attempt to complete this definition, it was immediately concluded that the term "profession" excluded those engaged in the performance of detailed record keeping. This is not to imply that the performance of this function is unimportant to the professional accountant; it only means that the group felt that the general problem of accounting education does not include the provision of personnel for the bookkeeping function.

Another area of agreement in describing the professional accountant centered around his specific activities. It was generally agreed that the problem of providing a formal education for the professional accountant should not be influenced by the types of specialization available to the accountant in his practice. That is, the dichotomies that are sometimes drawn between financial and managerial accounting or public and private practice are not relevant to the discussion of the educational needs of the professional accountant. First of all, there is a great similarity in the types of problems facing the accountant regardless of his specialty and, secondly, the choice of specialty is usually made after the completion of the formal portion of his education. There was some disagreement over how complete the overlap of training of the prospective public accountant and industrial accountant should be. All agreed that the two fields require a common core of preparation; a minority

felt that as many as two or three courses should be different in the programs of the two groups.

### *The accountant of the future*

After reaching some agreement on the definition of the professional accountant, the discussion turned to a contemplation of his future duties and functions. In order to make some predictions of the future it was necessary to forecast major changes in the environment. Three trends were forecast: (1) a continuation of the trend of Government controls in the market place (but not necessarily at an increased rate), (2) a greater awareness on the part of business of its social responsibilities, and (3) a continued improvement in the technology of business management.

These environmental changes were expected to affect future accounting practice in large measure through a growth in the importance of the attest function. Attesting will not only become more important but it will also be applied to an increasing variety of subjects. For example, some members of the group predicted that Government agencies may soon require an attesting to private tax returns and possibly even to cost data in Government contracts, while others foresaw more emphasis on detecting fraud within Government agencies themselves. The growth in the importance of the attest function will also receive impetus from the business sector. The acceptance of social accountability by business will require "full disclosure" in areas other than income measurement and financial position.

The growth of the attest function will be accompanied by the integration of other accounting functions into it. The fragmented view of the attest and management service functions may well disappear as a greater awareness develops of the necessity of passing on the adequacy of the underlying control system in attesting to financial statements. There will be a greater tendency to examine the total accounting system rather than only the terminal data of the system. All of the participants concurred in the desirability of this merging process, but at least one member was less optimistic on the immediate prospects of the fully integrated approach.

However, there was more complete concurrence that these changes in accounting practice would require that the future professional accountant possess many more diversified management skills. In part, the need for diversified skills is a direct product of the integrated, total



systems approach that the group felt would come to dominate future accounting practice. It receives further emphasis from the expected technological improvements in management sciences and their wider application in business. To carry on his activities in the future, the professional accountant will need a solid background in economics, mathematics and statistics, and perhaps in behavioral science as well.

### *The university's role in the education of the accountant of the future*

From this discussion of the professional requirements of future accounting practice it became clear that the primary objective of the university training of accountants should be to provide these diversified management skills while also providing analytic training in the accounting field. An obvious limitation arises because the total number of hours of formal education is more or less fixed. Although some members felt that by 1980 it would not be possible to enter the profession without more than four years of training, the immediate problem is more accurately reflected in a four-year limitation. Instead of attempting to determine the specific number of hours in various fields of study, the discussion sought to discover a general set of criteria for curriculum development.

In the subject areas that are expected to provide more and more tools of business administration, e.g., mathematics, statistics, the behavioral sciences, etc., a criterion was established in terms of problem solving ability. It was argued that problem solving requires three distinct processes: (1) recognizing the existence of a problem, (2) stating the problem, and finally (3) solving it. The group unanimously favored training in these related fields to the extent that the professional accountant would be able to recognize problems. The emphasis of the training should be on the extreme breadth of each discipline so the student becomes acutely aware of how little he actually knows of the total subject matter in that field. An excellent analogy was drawn between this criterion and the business law experience in accounting education. The student has traditionally been taught to recognize problems requiring legal counsel by giving him a broad view of these legal problems and their complexity.

In addition to teaching the prospective accountant when and whom to call upon for aid in problems outside his professional scope, this approach should enable the accountant to communicate with other busi-

ness specialists. The ability to communicate with nonaccountants in business management (whether the Ph.D. in statistics or the production foreman) will become increasingly important as the functions of accounting are enlarged. In order to achieve such a goal, the accountant's study in these related fields of business administration must be fully integrated with the accounting curriculum itself.

Perhaps the most controversial subject in the seminar was the place of accounting in the business curriculum. One view, held by a majority of the participants, was that the amount of training in accounting should be reduced to, say, eighteen to twenty-two hours as a maximum. This study would be almost completely theoretical with primary emphasis on the logical basis of accounting principles. The objective of this training would be a preparation for dealing with problems of the future, rather than those of the "here and now" variety. By reducing the number of required hours in accounting, students would have an opportunity to undertake more intensive study in a second field or take extra work in particular areas of accounting, depending on their own interests.

The other view was to require approximately twenty-seven, thirty or more hours in accounting study, which presumably would include training of a more technical nature. The argument advanced for this view was that the development of a professional body of knowledge required extensive training in the field, i.e., accounting could not be considered a profession unless it rested on a sufficiently large body of common knowledge. The spokesman for this position cited examples of both the legal and medical professions where specialized training is even more extensive.

Two interesting points were raised in rebuttal. First, the analogy with other professions was challenged with rather contradictory results. For example, it was asserted that the legal and engineering professions are presently attempting to decrease the amount of required training in their basic disciplines. Parochialism was cited as a reason for this de-emphasis. In any event, it is clear that the experience of other professions might provide a useful reference for the accounting education problem, but more complete information about these other professions will be required.

The second rebuttal point concerned the common body of professional knowledge. Although there was a general reluctance to offer specific definitions for such a body, it was agreed that the problem deserves much more intensive study. The establishment of a study group on the common body of knowledge was encouraged, but its task was certainly not envied by the seminar group. However, there was some agreement that this body of knowledge for the professional

accountant will tend to become more and more integrated with other management skills rather than consisting mainly of accounting procedures and principles.

In keeping with the integrated approach that marked the whole of the discussion, several participants recommended that separate schools of accounting should not be fostered. The problem of parochialism was again cited. The positive features of the separate school of accounting that were suggested were the possible advantage of accelerated accounting training at the graduate level for nonaccountants and the development of a professional *esprit de corps*. However, it was felt that these possible advantages were more than offset by the probability of higher quality education in the related areas at nonspecialty schools. Communications between the prospective accountant and the other business specialists would also be encouraged by having them meet in daily student contacts, rather than being kept apart in separate schools.

The question of accreditation was the second problem concerning the organization of the education program to be discussed. Most of the group's contributions in this area were limited to raising problems rather than offering concrete proposals. The discussion on this topic served to demonstrate the group's unwillingness to set forth specific hourly requirements for the curriculum. Such factors as variability in the quality and maturity of the student were cited as stumbling blocks to the development of uniform standards. The extreme difficulty of measuring the quality of instruction, especially if there is emphasis in the education on integrated work in the functional areas of business, further complicates the problem of accreditation.

### *The practitioner's role in accounting education*

Although the amount of discussion time spent on this topic was quite brief, the group's view of the practitioner's role in accounting education followed directly from the previous discussion of the university's role. Because the university has general responsibility for theoretical training in accounting and providing a "problem recognition" exposure to diversified management functions, it is incumbent upon the practitioner to provide training in the procedural aspects of accounting as well as the more intensive development of skills in specialized areas. It was recognized that this approach presents some

problems for the smaller accounting firms, but it was hoped that the Institute's Staff Training Program would help them in dealing with this problem.

In addition, the practitioner has some responsibilities for keeping the accounting teaching program cognizant of the practitioner's activities and problems. This can be accomplished through faculty internship programs and making available material for case studies. However, one public accountant reminded the teaching members of the seminar that some of the initiative for these programs must come from the teachers themselves.

### *Controlling entry into the profession*

The final topic of the seminar, the regulation of entry into the profession went beyond a consideration of educational programs, for this aspect of control rests, at least in part, upon political institutions. Because the legislative process is subject to normal political pressures, certain irregularities can be expected. For example, it was felt that many of the requirements preliminary to the CPA examination were aimed at reducing the number of failures on the exam rather than improving the standards of the accounting profession. Therefore, the group in general tended to favor less specific requirements for admission to the CPA examination.

The imposition of special requirements, e.g., requiring specified courses or a large number of semester hours of accounting courses, can deter experimentation in the curriculum. In fact, one extreme suggestion was to place no requirements on the accounting course work prior to the examination, but instead legislate in areas not specifically tested on the CPA examination. In other words, use the legal requirements as a means of bringing the necessary diversification to accounting education. Another suggestion was to eliminate the specific requirements by substituting a more general restriction, such as requiring an accounting major at an accredited institution. This, of course, introduces an implied set of standards, but it may produce desired flexibility in the control of entry into the profession.

In the case of the examination itself, there was a general feeling that a reasonably good job was being done in a difficult situation. There is, it was felt, need for improvement, in several areas, but principally in the direction of having the examination cover the new and expanding activities of the professional accountant. It was, however,

pointed out that a great deal of the exam's failings may be traced to a lack of participation by the members of the profession. One suggestion to correct this deficiency was to abolish the system of relying on voluntary contributions of questions for the examination and instead provide compensation for those performing this function. It was also suggested that more coverage be given to the management service activities, but it was agreed that there are certain limits to broadening the coverage; the exam must continue to satisfy its primary function as an evaluation device of an individual's competence to discharge the attest function.

### *Conclusions*

The general theme of the discussion was the need for diversification in the education of the professional accountant. The accountant of the future will be expected to understand and participate in a more extensive cross disciplinary approach to business affairs. To perform this function adequately his training must be broadened. Although it may become increasingly difficult to provide such a diversified program in a four-year period of study, the seminar made several suggestions toward this objective.

Perhaps the most important such suggestion was for the streamlining of the accounting training itself. By offering an accounting curriculum that emphasizes the logical and analytical aspects of the art at the expense of descriptions of procedures in specific circumstances, more of the student's time may be freed for course work in the related areas of business administration. The analytical approach to accounting study should also enable the accountant of the future to engage in a continuous learning program throughout his career. With the present rapid pace of developments, accounting education must prepare the members of the profession for a career of lifelong learning and adaptation to changing conditions.

Diversification in the curriculum must also accept certain bounds. The seminar arrived at a criterion of an ability to recognize problems and to communicate with other business specialists as the bounds for areas related to accounting. It also encouraged the use of an integrated approach to emphasize the vital relationship between this diversified training and the profession's basic function of accounting.

# Emory University

---

*April 30, 1962*

## PARTICIPANTS

PROF. HOMER A. BLACK, *Discussion Chairman*, Florida State University, Tallahassee

MR. JOHN R. JONES, *Arrangements Chairman*, Arthur Andersen & Co., Atlanta

PROF. NORTON M. BEDFORD, University of Illinois, Urbana

PROF. ROBERT L. DICKENS, Duke University, Durham

MR. MAURICE M. EGAN, Lockheed-Georgia Company, Atlanta

DEAN S. PAUL GARNER, University of Alabama, Tuscaloosa

MR. THOMAS W. HUDSON, Haskins & Sells, Atlanta

PROF. PATRICK S. KEMP, Emory University, Atlanta

MR. EDWARD S. LYNN, American Institute of Certified Public Accountants, New York

MR. A. WALDO SOWELL, Sowell & Hardin, Atlanta

MR. A. MARTIN STERLING, Sterling & Sterling, Atlanta

PROF. WILLIARD E. STONE, University of Florida, Gainesville

PROF. WILLIAM TERRILL, University of North Carolina, Chapel Hill

## *Future of accounting*

It was generally felt that the meeting should first attempt to define the accountant of the future in terms of (1) the kind of work environment in which he must perform and (2) the type of services which he will be called upon to render. The group generally agreed that when accounting education is considered, the present generation bears a heavy responsibility for the future of accounting since the young people who are presently being educated will be the leaders of the profession near the turn of the century. Certain members of the group, however, cautioned against accepting this conclusion too quickly. They stated that we must not lose sight of the fact that we must also prepare accountants who are going to face the problems of the business world today and in the immediate future. At least one member cautioned against the profession spending an excessive time "crystal-ball gazing" into the future and letting this unduly influence contemporary education. The statement was made that even if we, the group, could agree on the future of accounting today, our concepts are going to be different next week, next year, ten years hence, and will evolve over the next 40-year period. The above statement notwithstanding, the group agreed on the importance of first defining the duties of the accountant of the future.

It was felt that public accountants of the future will experience a gradual change in their attest function. It was generally agreed that the accountant of the future may be called upon to express an opinion as to how well management is discharging its responsibility, not only in terms of the validity of reported income and financial position, but also with respect to social objectives such as fair rates of return on investment. The point was made that if accountants do not assume this responsibility, someone else will, perhaps the Government. The suggestion was made that the attest function may be expanded to the point where accountants will be called upon to render opinions on such issues as how well management meets its predetermined objectives and whether or not contract provisions are met.

A long discussion was held regarding management audits and whether accountants of the future may have to define the goals of business. After considerable discussion and debate on these subjects the following general conclusions were drawn, although agreement was not unanimous:

1. Society at large must set the goals of business. Accountants need

to do some basic research into defining these goals. Accountants may be called upon in some way to report on how well a business meets these goals. No definite conclusion was reached in this area due to the lack of definitive information.

2. Accountants are not now generally called upon to render so-called "value judgments." We report on the determination of income as being in conformity with generally accepted accounting principles but we do not state whether this is the profit that the management of a business *should* have made with the resources at its disposal. It was generally felt, although there was some dissent, that accountants should not attempt to render value judgments with regard to social or business objectives and goals.
3. Management audits may still be performed in which the accountant can state how well management is meeting its previously defined goals or goals set by directors or stockholders. In addition, the general efficiency of management may be reported on if objective measurement devices can be agreed upon and perfected.
4. We already have some tools in our possession to aid in determining management efficiency such as price-level accounting. For instance, if we can take out of the profits amounts that came to a company through the change in the price level and state such amounts separately, then we can have a more useful report on efficiency.

As to background and training of the future accountant, the general consensus was that the junior accountant, both public and industrial as we know him today, will cease to exist. He will be a higher level man and must be better acquainted with statistics, economics and mathematics than is his present-day counterpart. The accounting graduate of the future will need to be more of a generalist and less of a so-called specialist.

### *Goals of university accounting programs— education or training?*

A good deal of lively discussion was held on this topic. The question was raised as to whether the universities should broadly educate the young accountant in over-all concepts and eliminate some of the current emphasis on training of the "how to" variety. It was pointed out that there already exists a tendency to eliminate practice sets and



the like. This raised considerable debate and the general consensus was that the program should include sufficient attention to technique in order to allow the student an opportunity to understand how to apply the theory. How much technique this would require was left open but it was generally felt that it should be somewhat less than is currently taught. The young accountant best receives this type of training after he leaves the university environment. It was pointed out, however, that while the larger public accounting firms and industries can render this training, the smaller public accounting firms and smaller industrial firms have no comparable facilities.

### *Responsibility of universities and the profession*

The group generated much discussion on this point and it was generally agreed that no definitive line could be drawn since education is, or should be, a continuing process. A man who has acquired a formal university degree has simply completed another phase of his education. The consensus on the divergence of responsibility between the universities and the profession was that the universities can best teach conceptual material.

One practitioner stated that we have a substantial investment in educational facilities and in the work of the Institute and that we should use these in the best way. It was felt that the universities are the logical places to teach concepts, conduct basic research, and accumulate and organize the continuous build-up of the knowledge and experience of a growing profession. The group also felt that the profession could do more than is presently being done to welcome university faculty members into professional gatherings and to make them feel that they are an important part of the profession.

### *Internship programs*

The subject of internships evidenced a considerable difference of opinion among the group. The group was able to agree substantially to the following:

1. The internship program, if properly administered, may aid in accounting recruitment by generating interest among students, and
2. The internship program may aid the student by giving him a practical look at the accounting profession.

The group could not reach agreement on the educational value of internships. It was advocated by some that this phase is a vital part of the education of a young accountant. This group felt that the young accountant might benefit in several ways such as (1) the generation of greater enthusiasm for his future studies when he has a first-hand knowledge of some of the practical aspects of business, (2) experiencing the requirement of having to submit a written report and to have his work judged by someone other than his professors and (3) developing an insight into how a business functions and where accounting fits into the picture.

Another group felt that the internship program offers little academic benefit and may even be harmful to a greater or lesser degree in the following ways: (1) a student who spends most of his internship doing one type of audit might tend to receive an exaggerated opinion of the importance of this particular phase of accounting and lose the broader perspective and (2) some students do not return to the university after completion of the internship. This latter problem could be overcome in some measure if an accounting degree is made a requirement for the CPA certificate.

As to the length of internships, it was generally felt that they should be longer than the summer vacation, perhaps six to nine months. No agreement was reached as to where in the academic program an internship should come although the majority seemed to favor the end of the junior year as opposed to the sophomore year.

### *Content of university programs*

The group, because of time limitations, chose not to become involved in a detailed discussion as to the specific content and description of courses for the "ideal" program for education of future accountants. The subject was, however, broadly discussed and the following points brought out:

1. Students entering accounting should have a broad educational base with meaningful background courses in the behavioral sciences such as psychology and sociology, in mathematics (including finite mathematics and perhaps calculus), and in the use of the English language.

The business core should then consist of such courses as statistics, marketing, finance, economics and management. One member of

the group pointed out that accounting majors, like many typical business students, often have inadequate course preparation because excessive leeway is allowed in choosing courses. Perhaps the profession, like law and medicine, should agree on a pre-professional curriculum and require the student to adhere generally to it.

Another interesting question raised with regard to the nonaccounting courses was whether or not there is time in a four-year program to furnish the student with a broad general background and, at the same time, offer sufficient accounting core subjects. Several participants felt that a reduction in required accounting courses or restricting the number of electives which may be taken in accounting was desirable. Another solution offered was to have a five-year program.

One interesting point raised in regard to the five-year program which also sheds some light on the problem of smaller firms is that, perhaps, there should be two general approaches, as follows:

- A. The four-year program should furnish the student with a broad introduction to accounting leaving out most of the frills and concentrating on concepts with very limited work of a practice nature. Graduates of this program could then be hired by the larger firms which have the facilities for extensive on-the-job training or formal training programs.
- B. The five-year program would then concentrate upon imparting professional knowledge of a more practical nature. The smaller firms could hire these graduates and not be required to furnish extensive additional training.

This was merely a suggestion and was not fully discussed.

The full implications of the five-year program could not be adequately pursued due to time limitations.

2. The entire group felt that considerable guidance will be available for the development of accounting programs if the Institute's proposed program of study concerning the "common body of knowledge" is brought to a successful conclusion.
3. There should be a revamping of existing courses with less delineation of the traditional course lines as we know them today, such as cost, auditing, intermediate and advanced. There is considerable repetition and wasted motion here which could be eliminated if a more unified approach were taken.

4. There should also be a closer tie-in between accounting courses and other business courses such as management, economics, and statistics.
5. The courses should be upgraded with concentration on concepts but with sufficient problem work to test the students' grasp of conceptual material and to furnish a practical insight into its uses.

### *Influence of the CPA examination*

A very limited discussion was held on the influence of the CPA examination on accounting curriculums. It was generally conceded that the curriculums of the weaker schools were considerably influenced by the content of the examination and that even in the better schools attention was paid to it. As an example, the course in consolidations was cited as reflecting this tendency. A question was raised as to whether too much time is spent on subjects of this type which could better be used elsewhere.

Another question which raised some discussion was "who is doing the wagging?" Are university curriculums influencing the content of the examination or is the converse true? Is the situation one of mutual dependence? It was generally conceded that the two are mutually dependent and that there is little use in placing new material in the examination in advance of its inclusion in college courses since no satisfactory answers of any consequence would be forthcoming on the examination papers. The examination is part of the licensing process and must serve this purpose adequately. It was pointed out that the Institute is aware of contemporary developments and has authorized the inclusion of more management services materials on the examination in the future. A request was made for the teachers of management accounting to contribute suitable examination material to the question stockpile which is somewhat lacking in this as in other areas.

### *Faculty considerations*

Although this subject was neither a part of the program agenda nor discussed as a formal topic, several interesting points in this regard were raised during the meeting. Several of these points are worth

enumerating and should be seriously considered in any conclusions which may ultimately be drawn in regard to accounting education in the future.

While it was generally agreed by all concerned that the accountant of the future should be more broadly educated in the use of mathematics, statistics, management services, and the like, the point was raised on several occasions that there would have to be some extensive retraining and retooling of existing accounting faculties to carry out these suggestions. One member frankly admitted his own inadequacy in statistical sampling as well as in mathematics and management service areas. It was pointed out that many practitioners are also deficient in many of these areas. All members of the group stressed the need of encouraging programs of study designed to keep faculty members abreast of the most current practices.

The point was raised that more encouragement should be given to an exchange of fellowships between the universities and the profession; that is, educational fellowships inviting practitioners to spend some time on the campus and industrial fellowships enabling more faculty members to spend time in industry.

### *Recruiting problems of the profession*

Several interesting points were also made concerning recruitment problems within the profession. Part of the problem lies in the public image of the profession as exemplified in movies, television, novels and the like. The statement was made that the accounting profession is probably the least understood of all the professions. The profession needs to give some serious consideration as to how to place before the public the proper image of the profession and its contributions to society. Some valuable work is being done in this regard but one member pointed out that it is not sufficient. Another question raised concerned the recent and much publicized reports on schools of business which point up the fact that relatively lower level students make up a large percentage of the business student body. Part of the problem lies in social values. For example, many of the better students are attracted to science because of prestige factors.

While it was pointed out that accounting usually attracts the higher level students in the school of business, the profession has a responsibility to improve the quality of students in the schools of business of which accounting is a part.

# Stanford University

---

May 4, 1962

## PARTICIPANTS

PROF. OSWALD NIELSEN, *Chairman*, Stanford University, Stanford  
MR. GEORGE D. BAILEY, Touche, Ross, Bailey & Smart, Detroit  
PROF. A. B. CARSON, University of California, Los Angeles  
MR. TINDALL E. CASHION, Arthur Andersen & Co., San Francisco  
DEAN KERMIT O. HANSON, University of Washington, Seattle  
PROF. LYLE E. JACOBSEN, Stanford University, Stanford  
PROF. ROBERT K. JAEDICKE, Stanford University, Stanford  
PROF. CHARLES E. JOHNSON, University of Oregon, Eugene  
DEAN CHARLES W. LAMDEN, San Diego State College, San Diego  
MR. HARRY R. LANGE, Cutter Laboratories, Berkeley  
MR. EDWARD S. LYNN, American Institute of Certified Public Accountants,  
New York  
PROF. WALTER B. MEIGS, University of Southern California, Los Angeles  
MR. LEWIS W. ROE, United States Steel Corporation, San Francisco  
MR. GEORGE H. WEBB, JR., Webb & Webb, San Francisco  
PROF. LAWRENCE L. VANCE, University of California, Berkeley  
PROF. WILLIAM J. VATTER, University of California, Berkeley

## *The future role of the accountant*

In discussing the future role of the accountant, the opinion was that public accounting is here to stay and will continue to contribute significantly but not exclusively in the areas of taxation and management. The management aspect is concerned with compiling records, providing accounting systems, as well as with using operations research techniques for control of production, and other business activities. Utilization of knowledge gleaned from these subjects will not substitute for management decisions based upon judgment. The major role of public accounting is seen as one which provides management with increased information and better reports to enable the improvement of the decision-making process. It is realized that, whatever decisions are to be made, there must be accounting information upon which to base them. The improvements that are possible in accounting information with the use of the computer mean that management has less excuse for wrong decisions than it ever has had before. It is, thus, visualized that the public accounting profession will grow and that the limitations to its growth will be its ability to attract and adequately train people to continue in this profession.

With respect to small business, it is believed that the future of public accounting will relate very closely to the decision-making process since the accountant must act in the capacity of a controller for his small client. In addition, tax aspects will also be important in future dealings with small clients.

The opinion was emphasized that public accountants are the biggest business advisers today and that much of medium-sized to small business depends upon accountants for guidance in management.

Because the accountant in future business will thus serve as an adviser on tax and other managerial matters, it is believed important for the educated accountant to be able to marshal and interpret data relative to the many complex elements of business. More than one member of the group stressed the importance of the accountant's knowing the record-keeping function's structure and at the same time knowing enough of the new techniques and applications so that he can contribute to an imaginative and progressive management.

It was indicated that in this future development, the verification of

accounts may well be expected to remain a fundamental operation of the certified public accountant. This verification procedure, however, will be based upon better ground rules than now apply to the auditing function. Despite the establishment of formal ground rules, judgment will still be an important consideration in making an audit. Also the accountant needs to have a well-defined knowledge of the "principles" to which he certifies.

In private industry, the future of accounting likewise will move away from recording per se to the use of information in planning the affairs of business. Because business decisions involve the choice of alternatives having economic implications, the future financial officer will have a greater role in planning. As such, there will also be greater use for mathematical techniques and computers.

The future role of the accountant in Government will also be one of decision making, as is well illustrated by the work now being done by the U. S. General Accounting Office. In much of Governmental accounting of the past, a collection of information and a recording against the appropriations have been the major end. However, in the future, appraising the effectiveness of conducting Government operations is the objective.

Thus, it appears that, regardless of whether one is thinking of public accounting, accounting in industry or in Government, its major future role is with respect to planning and decision making. A concomitant role will also be with respect to taxes in view of the heavy present and prospective tax loads upon business. This tax function is in itself one of planning and decision making.

### *The skills needed by the future accountant*

Our discussion on skills brought out, especially at the instigation of certain of the nonacademic members of the seminar, that a knowledge of basic elements of accounting practice and procedure is necessary to obtain sound information upon which to base decisions. It was brought out, however, that any system of mechanics, regardless of how sophisticated it may be, cannot take the place of good judgment. Therefore, training to sharpen the accountant's capacity for exercising good judgment will be necessary. The details of such training were not delineated, although the need was emphasized.

One of the most important apparent skills today for the future accountant is an improved knowledge of mathematics and statistics, both



of which will improve his capacity to interpret information and use it in planning and decision making.

It was also indicated that, although a record-keeping function must necessarily continue to exist, it will exist in an altered, improved form. It was, thus, suggested that accounting may not be as much a double-entry as a multi-sided function designed for the specific purpose of giving information uniquely oriented to its multiple uses in business. Thus, the techniques cannot be merely bookkeeping or other recording techniques, but new ones must be developed from other fields.

One important element of record keeping is its flow and structure, and it is believed that knowledge of data flow and structure needs to be developed from some experience on the job. Thus, flow and structure of records cannot become a part of basic system building unless a person has some actual skill in dealing with quantitative information on the scene of its generation and use.

Knowledge of the computer is likewise important and it was indicated by educators and businessmen alike that there may be a tendency to stress the generation of output from the computer and limit knowledge of the machine to that phase. It is, however, necessary to have some knowledge with respect to input if one is to be able to generate an output of maximum usefulness. This again emphasizes the importance of the skill of understanding business and the system of generating the flow of information about it.

It was also assumed important to have some knowledge of economics. This is particularly true because data generated for use in decision making and planning is information that deals with relationships within the business firm as well as of the environment with which it operates. For this purpose, the study of economics is particularly important.

Furthermore, the accountant who deals with figures must also recognize that he deals equally much with people, and for this reason, a knowledge of the behavioral sciences also is considered important. Such knowledge will include an understanding of organizational patterns and behavior, the psychology of motivation, and the capacity to measure the decision-making ability of individuals.

Great stress was given to the importance of developing the accountant's skill in communicating. Especially emphasized as needful is the capacity to make out an intelligible report on short notice.

Attention was also given to the question of maximizing the number of skills which the prospective accountant can acquire within the limited span of time of his academic studies. In this respect, it was believed that in order to maximize these skills, it is important that a lesser number of hours be devoted to accounting courses per se. This

means a condensation of certain material, a disregarding of certain obvious material which can be referred to in handbooks and other reference books, and a concentration on theory and the general nature of the accounting function in society. It was generally felt that the accountant of the future should have a three-year body of rather common, general knowledge; two years of general business administration; and one year of basic accounting. The group was not particularly concerned with whether this accounting information is given as a concentrated dose in one year or whether it is spread out over more than one year and taken concurrently with other courses. The major objective is to get the maximum of skills. In order to maximize these skills, the group did not believe training should be obtained in a graduate professional school of accountancy as such.

### *The educational programs in accounting*

The first phase of educational programs in accounting to be discussed was the course structure of the accounting curriculum. In this connection, it was pointed out that the university best serves as the theoretical teacher and should assume its major responsibility for the teaching of theory rather than the recitation of mere facts and outlining of procedures. Theory should encompass broad, general concepts of accounting as it applies to business problems. In addition, the theory of auditing must be understood. There was some opinion that educational institutions should avoid proliferation of courses, and instead, move to relatively few courses where accounting would be given in a maximum of between twenty-four and thirty units of course work.

In establishing the curriculum, an important problem to deal with is that of the image of the accountant which students possess. It was felt that in the past, this image was of a person not generally capable of the highest caliber of academic work. With this impression of a low-level person (intelligence-wise) going into accounting, there may have been an automatic tendency to exclude some of the best students from accounting. It was felt that this image has improved during the past few years, and that further improvement could accrue from our maintaining of high standards of performance. Moreover, accountants need to improve the image by having a chance to advise liberal arts students early enough in their curricula to help direct some of the better students into the accounting area. It was felt, however, that our image within the business school is not as good as it is on the outside.

Perhaps it is an outgrowth of this poor image that teachers have a tendency to underestimate the sophistication of their students.

Considerable discussion centered around the textual material and methods of approach which would be most suitable for future instruction. A basic weakness seems to be the general textual material. It was felt that this leans too much toward the description of record-keeping routine and that it should deal much more with the concepts to be derived and formulated from accounting information. Secondly, there was considerable discussion of application of case materials. It was indicated by one professor that he had taught a course in accounting in which he used no problem material. He indicated that the students had a great deal of fun but that there seemed to be serious gaps in their knowledge. It was his belief, therefore, that either problem material of a traditional nature, or case material should be designed to enforce the exploration of the student's knowledge for gaps in it.

It was also pointed out that the course structure should seek less to educate the student for his first job than it should be oriented towards the higher level positions to which he would have capacity to aspire. It was notable that in orienting to higher level positions, there was no specific spelling out of the exact level to which the student should go. The general feeling was that the level of attainment would, of course, depend upon the capacity of the student and, therefore, that the training should be such as to enable him to rise to the extent which his capacity would permit him to do. It was difficult to get any specific description of the course structure, except along the following possible lines:

### *Future orientation towards planning*

#### University (Core group):

1. Statistics, economics, law, taxes, mathematics
2. Basic courses in accounting for planning and decision making, theory of record-keeping systems
3. Operations research, tools of computer (simulation or data processing)

On-the-job training (This may include, but would not be limited to, three months taken off from school):

1. The general experience period—CPA experience
2. Programming

Preassignment training (Done after student has diploma):

1. Mechanics related to data flow and use

## Continuing education

1. Theory
2. Social developments
3. Legislation

Considerable attention was given to the mathematics that should be taught. From the industrial accounting side, it was mentioned that development is needed in algebra and calculus, matrix mathematics, and probability mathematics. It was also felt that the curriculum must include some work on computers. Considerable work on operations research is assumed to be necessary.

## *The CPA examination*

Some time was spent on the future nature of the CPA examination. It is believed that the CPA examination as presently constituted does not test knowledge or ability of future accountants to demonstrate the adequacy of their training or their capacity for doing accounting work as it will be required in the future. The group experienced considerable difficulty in giving any clear expression as to what the CPA examination of the future should be. However, several suggestions were made as to its future nature. Among these is the need to establish a stronger educational requirement for the candidate for the examination. It was generally agreed that he should be a college graduate.

It was also believed that the CPA examination should not be a mere repetition of course examinations, but that it should measure the extent to which the examinee had developed some capacity to orient his entire accounting knowledge into a system specifically adapted to the environment in which he operates.

It was believed that certain new areas should be covered in the examination. Among these would be ethics and economics. It was felt that the law section should be continued, although there was some doubt as to the quality of the examination done in this area.

One section of the examination should deal with planning and decision making. This would involve a knowledge of and a capacity to use operations research in cases that would confront the examinee.

Statistical sampling and probability theory should also be covered in the examination.

A question also arose as to whether the examination ought to be

given at the end of the academic curriculum in accounting, the same as a bar examination is available to a law student after he finishes his academic studies, or whether the examination also should reflect some experience. It was believed that the examination may well be given at the end of the academic curriculum as a test of the academic preparation. This will make it possible to design some general level of knowledge that all accountants will need to have so that the examination will probe into the competence of the examinee with respect to this level of knowledge. This will exclude from the examination variations in practice from firm to firm or company to company and leave these as part of the training and competence that the individual will acquire with an expanding experience in his field.

# University of Texas

---

*May 18, 1962*

## PARTICIPANTS

- PROF. C. AUBREY SMITH, *Chairman*, University of Texas, Austin  
PROF. WILTON T. ANDERSON, Oklahoma State University, Stillwater  
DEAN DONALD R. CHILDRESS, Oklahoma University, Norman  
MR. G. L. DALFERES, Haskins & Sells, New Orleans  
PROF. PETER A. FIRMIN, Tulane University, New Orleans  
PROF. E. O. HENKE, Baylor University, Waco  
MR. LOUIS M. KESSLER, Alexander Grant & Co., Dallas  
MR. RONALD L. McVEY, Tenn. Gas Transmission Co., Houston  
MR. JAMES A. MILLER, Renker & Rudolph, Hobbs, N. Mex.  
MR. BERT RUSH, Arthur Young & Co., Houston  
MR. GREGG C. WADDILL, Phillips, Sheffield, Hopson, Lewis & Luther,  
Houston  
PROF. GLENN A. WELSCH, University of Texas, Austin  
PROF. NOLAN E. WILLIAMS, Arkansas University, Fayetteville  
MISS VELDA V. WOODS, Collier, Johnson & Woods, Corpus Christi  
MR. HARRY C. ZUG, Lybrand, Ross Bros. & Montgomery, Philadelphia

## *Introduction*

The meeting was begun with a question as to what the AICPA hoped to gain from the 1962 seminars. The point was made that at the first of the two comparable seminars in 1961 there was considerable difference of opinion expressed on topics under discussion. Even in the face of a substantial lack of consensus, the exchange of ideas was considered to have been of benefit to all in attendance. The thought prevailed that perhaps a sampling of opinion in different geographical area of the country might show a "broad spectrum" of opinion sufficient to aid the committee on relations with universities in formulating appropriate educational policies to recommend to the Council of AICPA.

In outline, the objectives were considered to be:

1. A forum for exchange of ideas between educators and practitioners looking toward (a) an improvement in education of accountants; and, (b) a means of obtaining a deeper understanding of the problems facing educators in preparing students to enter the practice of accounting.
2. A means of securing background data for the soon-to-be-named commission on the common body of knowledge for accountants.
3. A hope that these conferences would provide data out of which the AICPA might evaluate its educational policy.

## *The accountant of the future*

It was generally agreed that the services performed by public accountants at present will be continued, improved and upgraded over the years to come. Auditing will have increasing importance and will continue to be the bread and butter work of most public accountants. Tax practice will also continue to occupy a substantial part of the accountant's time, effort and thought, particularly at the local firm level. The

profession is not regarded as ready to turn over its tax practice to other professionals. In fact, tax planning for both business and estates will become of increasing importance to the accounting practitioner. The accountant of the future will also find himself performing more and more in the area of special investigations, particularly, management services.

It was generally agreed that the public accounting profession must have both specialists and general practitioners. At the level of the local firm, and to a certain extent in some offices of national firms, it was maintained that write-up work, referred to as "dog work," will have to be continued when required by clients. Much of this work, it was said, is now performed by machines rather than by pen and ink methods.

### *Management services and management audits*

The major discussion concerning the accountant of the future centered on the topic of audits of management. It seemed necessary first to distinguish management audits from management services. The latter was conceded as having been conducted by public accountants for many years and included engagements in connection with budgets, cost analysis and cost systems, systems of internal control, general accounting systems and the like. That the accountant of the future must have a knowledge of the uses of electronic machines and equipment was taken as a matter of course. With regard to the management audit, the following ideas were expressed:

1. The public accountant is trained to make audits of the effectiveness of a company's overall management, including top management. But before he enters upon such an engagement it will be necessary to:
  - a. Admit that he cannot pass qualitative judgment (whether good or bad) on management, but he can verify the progress of management toward its objectives as predetermined by said company management or outside consultants. He can thus reflect fairly the progress of management toward its objectives. Or stated differently, he can measure the degree to which each objective has been achieved.
  - b. Maintain a staff of experts in other fields such as marketing, engineering, etc., or be prepared to hire and supervise outside experts as needed.
2. The profession is not yet ready for annual management audits, i.e., audits to be made annually along with the regular audit of financial statements.



3. Management audits are in the nature of special investigations to be requested by management itself or by outside groups such as financial institutions, stockholder groups and perhaps even governmental agencies.
4. In response to the question, "Are any public accountants now making managerial audits?" the only answer given was that the General Accounting Office purports to be doing something in this direction.

Although there was no complete unanimity concerning the nature and content of management audits, there was complete agreement that the accountant of the future, both public and corporate, will have to become more management conscious and be trained to delve more deeply into problems of management.

### *Responsibility of the university in preparing students for the accounting profession*

No one questioned the right, even the obligation, of colleges and universities for providing the basic general and liberal education needed for citizenship, the general business and economic training required for an understanding of the economic world in which we live, and a minimum of accounting education and training.

Some felt that agencies such as the American Accounting Association and the Association of CPA Examiners were correct in their appraisal of collegiate course work in the ratio of 50% general and liberal, 25% general business and applied economics, and 25% accounting. Some participants were of the opinion that this outline of education was acceptable only as a minimum and that it applied only to students at the undergraduate level.

An opinion was expressed, however, that 25% of the course work devoted to accounting would be excessive for the excellent student who might profit more from less accounting work and more general education or business administration courses.

There was general agreement that it is not the responsibility of the colleges to prepare the student in narrow areas of specialization such as hospital accounting, utility accounting, hotel accounting and petroleum accounting. It was also agreed that the colleges are not educating all prospective accountants for the same level of potential accomplishment. Some of those who go to college will remain "Indians" whereas others will become "Chiefs." This discussion seemed to lead to the

conclusion that one standardized college curriculum is not advisable for all students in all areas of the country; that there may well be four-year programs, five-year programs and perhaps even six-year programs.

One participant from industry expressed the view that the typical four-year program for students securing the BBA degree with approximately thirty semester hours of accounting is sufficient for the student looking toward an accounting career in industry. He was quick to assert, however, that a year of concentration or specialization beyond the Bachelor's degree was needed for the person who contemplates public accounting as a career.

Although some differences of opinion prevailed concerning the degree of concentration, it was generally agreed that the student graduating with a major in accounting should have more than an ephemeral knowledge or general understanding of accounting. On the contrary, he should have enough technical training—enough competence—to secure and hold the position of a junior staff assistant. It was also contended that his training should be such as to permit him, with experience, to advance in time to ever higher levels.

### *University's responsibility to prepare for the CPA examination*

It was generally agreed that the standard four-year program leading to the BBA or BS degrees was inadequate to prepare the student to sit for the CPA examination. It was believed, however, that such a program would lay the groundwork which, with additional study and professional practice, he should be able to pass the examination.

Most participants seemed to think that a fifth year of course work in accounting and related fields, following the typical Bachelor's degree with concentration in accounting, should prepare the student to make an adequate showing on the CPA examination.

There was unanimous agreement that colleges and universities had no responsibility for providing "cram" courses and that the college responsibility ended with the giving of sound, solid training of use to the student in his future career. It was admitted, however, that the CPA examination tested the student pretty thoroughly in the subjects and topics which he studied in advanced accounting, auditing and tax courses in college.

## *Educational programs for the accountant*

### *Undergraduate—basic intellectual preparation*

The discussion covered the entire gamut of grammar, rhetoric, spelling, English, oral and written communication, behavioral sciences, physical sciences, economics and mathematics. There was general consensus that the student who had quality instruction in these areas of knowledge should become a better accountant. The point was raised, however, that due to "departmentalitis" and the desire for specialization in liberal arts courses that these subjects were not necessarily liberally taught. What is needed is less specialization in arts and sciences courses and more survey-type coverage and instruction.

The subject of mathematics for the accountant came in for major consideration and centered around not how much mathematics but what particular topics should be covered. It was thought that mathematics departments in most universities have failed to organize courses to meet the particular needs of the accountant of the future. Hence either such departments, in consultation with business faculties, should be requested to organize mathematics courses for accounting students, or schools of business should organize their own courses in mathematics. Topics most frequently mentioned to be included in the mathematics course were those techniques related to areas of operations research, linear programming, matrix algebra, some work in calculus and probabilities and work leading to computer programming. All seemed to agree that presently conducted six-hour course work in algebra and business mathematics was inadequate for those who aspire to a career in public accounting.

### *Undergraduate—the business core*

Little or no disagreement arose in the discussion of the typical core course work in management, marketing, finance, business communication and statistics leading to the Bachelor's degree in Business Administration. It was agreed that, while twenty-four semester hours of basic business courses, other than accounting, would meet minimum standards, more emphasis might be directed toward statistics and statistical analysis.

### *Undergraduate—accounting*

Considerable attention was devoted to the mental level of those who entered upon an accounting program. Mention was made of a statistic

which claimed that only 13% to 15% of those completing an undergraduate business degree had a four-year average of B or better. Belief was expressed that accounting majors rated higher than business administration students generally and hence had a better grade average.

The number of courses or semester hours devoted to the undergraduate student did not appear important. It was agreed, however, that in those schools having honors sections that a superior student could master the first fifteen semester hours course work in nine semester hours of instruction time. It was regretted that not enough of these high caliber minds were entering schools of business and hence were not moving into the accounting program.

The areas in which an undergraduate student should be expected to secure instruction were stated to be:

1. Tools for analysis—mechanics and procedures
2. Principles and theory
3. Interpretation and analysis
4. Federal taxes
5. Cost and managerial
6. Auditing

Although there was some disagreement as to what specific topics or subjects should be included and excluded at the undergraduate level, there appeared to be agreement that any substantial specialization in a particular area of accounting should be avoided. Methodology in teaching was of considerable concern to the educators present. In response to the statement that colleges should stay with principles and leave practice to the practitioner, the educators were of the opinion that theoretical principles were pretty empty without some demonstration of their applicability. They contended that problem solution and case analysis were necessary to make principles come alive to the student and be retained by him. For example, in teaching the tax course the preparation of tax returns was regarded as useful if such assignments were needed to implement the teaching of underlying concepts and principles. A routine teaching of the course in which the major emphasis was on line-by-line return preparation was regarded as unsatisfactory.

Although the number of hours devoted to accounting at the *undergraduate* level might vary from school to school, it was generally conceded that thirty semester hours should be the *upper* limit. This program was conceived to be such that it would not make a finished accountant, but that it would lay an adequate foundation for him to become an accountant either by additional study or experience, or perhaps both.

In connection with the discussion re the common body of knowledge for accountants, the point was made and emphasized that members of the accounting profession should not assert that training in accounting subjects at the collegiate level is unnecessary. To do so would in effect admit that the profession is not a "learned" one and hence is devoid of a significant body of knowledge. No true profession in America has been built without a sound educational foundation with emphasis on collegiate training for that specific profession. The accounting profession is no exception.

### *The graduate student*

Two types of students were recognized as desiring course work beyond a Bachelor's degree: (1) the student who had pursued a business and accounting curriculum and (2) the student who had no business or accounting courses in his undergraduate program.

In connection with the business graduate, it was revealed that under certain rules developed by the American Association of Collegiate Schools of Business there will be a strict minimum of specialization allowed for those who pursue the MBA degree. This rule concerning specialization apparently applies only to the university that wishes to have its graduate work accredited by the Association. Also it was stipulated that no senior work could be taken for graduate credit toward the MBA degree. Thus it appears the MBA is to become strictly a general business degree. Apparently, the student desiring some specialization in accounting at the graduate level (or for that matter any other area of business), will have to seek a degree other than the MBA. One answer to the student who desires more professional and technical educational training in accounting would be to pursue a specialized accounting degree, such as the Master in Professional Accounting degree offered at the University of Texas or the Master of Accounting Science degree at the University of Illinois.

One participant suggested that a Master's degree in accounting was inappropriate if a Bachelor's degree in accounting had not been previously received. A counter argument was made that the student pursuing the Master of Business Administration degree is not required to have a Bachelor of Business Administration degree. He contended that the fifth year should produce a Bachelor of Accounting degree somewhat along the lines of the LLB degree. He argued further that only the B average or better student was able to pursue the Master's degree, whereas many students aspiring to a career in accounting could not meet this high grade standard. He believed that there are many young people with C averages who need more accounting training and that

to bar them from further classroom instruction would not be in the best interest of the profession. In fact, they are the ones who may profit most from training in advanced courses. The point was raised that perhaps both degrees should be offered, the Master in Accounting degree to the superior student and the Bachelor of Accounting degree to those who fall below the B average but above the C average.

The point was made again in this discussion that the student who aspired to public accounting, irrespective of which degree he applied for, should be advised to pursue a fifth year of education including some substantial number of advanced accounting courses.

Next the question was raised as to what could be done for the bright student who earned an arts, engineering or science degree but who subsequently entertained ideas of becoming an accountant. For him it was proposed that a program consisting of from twenty-one to twenty-seven graduate hours in management, marketing, finance, statistics and economics; and thirty-six to thirty-nine hours of graduate and senior courses in accounting (including a thesis or internship) would provide training superior to that of the BBA student with concentration in accounting at the undergraduate level.

The point was made that graduate work in accounting and business administration is expensive and that perhaps only a relatively few colleges and universities (one hundred or less) in the United States should attempt to provide training beyond the Baccalaureate degree leading to a professional career in accounting.

### *The professional school of accounting*

Although all present had some understanding and appreciation of what a school of accounting purported to be, there was some misunderstanding of its place in the university organization. No one present advocated a completely independent school on a level with the school of business, law school or graduate school. It was stated, however, that there is sentiment for such an independent school among some people in certain areas of the country. It was generally agreed that such a separation of accounting from other subject areas in business would be unwise for both accounting and the school of business.

Although no vote was taken, there was strong sentiment (but not unanimity) among both practitioners and educators for a school of accounting *within* the framework of the School or College of Business Administration. Numerous reasons for and some reasons against such

a school were mentioned; however, such lists can be found elsewhere and will not be catalogued here. Suffice it to say, those who approved such a school recognized that no substantial internal change would result, but that by moving from the department to a school considerable prestige would be gained from organizations and individuals from off the campus. It would place accounting on the same level collegewise with law, engineering, pharmacy, journalism, medicine, architecture, dentistry and other professional schools. Those who opposed seemed to fear proliferation of accounting courses if the faculty of the school were given control over its offerings and requirements. Perhaps a more subtle fear was the prospect of once having gained status as a school within the college, that the next step would be that of seeking independence from the school or college of business.

Those who spoke for the school of accounting said that in Texas the executive committee of the State Society of CPA's had approved the idea as had also two controls of the Financial Executives Institute of America. Reluctance of the AICPA to take a position was said to await the report of the commission on the common body of knowledge. Advocates of the school idea saw no basic reason for awaiting the commission's report. They maintained that a common body of accounting knowledge already exists and all that needs to be done is to have it described formally.

The question was raised concerning at what level a school of accounting should operate. Answers varied all the way from control over accounting courses and students from the junior year through graduate years, to a graduate school of accounting only.

### *Accreditation of accounting programs*

The large number of schools and colleges in the United States offering both elementary and advanced courses in accounting, the diversity in standards of library facilities, teacher training and experience, productivity of students and other variables seemed to justify giving some attention to the subject of accreditation.

Due to the wide range and variety of schools which are members of the American Accounting Association it was seriously questioned whether the AAA could be expected to lead the way to a policy of accreditation or actively participate in a program of policing accreditation.

The AICPA's policy at present is one of assisting existing accounting

agencies in accreditation activities. A practical solution submitted called for the Association of CPA Examiners to take the lead since state boards are *de facto* accreditation agencies if the state law sets educational requirements. As an advisory group it could make its influence felt with State Boards of Accountancy in connection with applications to sit for the CPA examination.

A more positive but perhaps somewhat distant approach suggested was that once the country had its schools of accounting, a committee from member schools could serve as the accreditation committee. It was also suggested that this might serve as another reason for the organization of schools of accounting.

### *Internships*

The subject of internships was broached but not explored in any substantial depth. Several thoughts seemed to prevail, namely: (1) that senior internships (those following completion of the junior year) are very helpful to the student who intends going no further educationally than through the Bachelor's degree; (2) summer field experience is helpful to the student but this short period of employment should not be defined as an internship; (3) the student expecting to pursue a fifth-year program would do well to spend four to nine months in an organized internship program prior to completion of the Master's degree; and, (4) an internship upon completion of an accounting program is little different from that of any other junior accountants entering practice. In the last mentioned situation there was some doubt expressed whether an internship program should be maintained at this level. Time for the conference ran out before full discussion was given to the matter of internships following completion of the terminal academic program.



# The Questionnaire

---





AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

666 FIFTH AVENUE  
NEW YORK 19, N. Y.

December 5, 1962

To participants in the seminars on the  
future of accounting education:

We realize that there is a natural reluctance to take the time from your busy day to fill out a questionnaire, but we think this one has a special claim. You are one of a relatively small group who were invited to meet in one (or more) of six seminars in different parts of the United States to discuss the future of accounting education.

The accompanying questionnaire is an attempt to obtain objective indications of your mature thought on the important matters that were discussed at the seminars. Please indicate what you now think about the questions--we are not asking for your impression of the consensuses that may have been reached at the seminar you attended.

We hope to publish the results of the questionnaire in the form of an article or monograph. The subcommittee on professional program believes that the thinking of participants will be helpful to educators and practitioners as they consider the future of accounting education.

You have already helped the cause of better education by participating in the seminar. We ask your further cooperation in completing the attached questionnaire and returning it to Ed Lynn, 666 Fifth Avenue, New York 19, New York, by December 21, 1962, so that we may have a complete response and thus obtain views representative of the various groups in the accounting and education fields in different sections of the country. Many thanks.

Yours sincerely,

*Robert I. Dickey*

COMMITTEE ON RELATIONS WITH UNIVERSITIES  
1961-62 Subcommittee on Professional Program

Robert I. Dickey, Chairman  
Sidney Davidson  
John R. Jones  
Oswald Nielsen  
C. Aubrey Smith

ENCLOSURE

# AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

Committee on Relations with Universities

## Questionnaire on the Future of Accounting Education

This questionnaire is being filled out by

- A public accounting practitioner \_\_\_\_\_
- An educator \_\_\_\_\_
- An industrial accountant \_\_\_\_\_
- A governmental accountant \_\_\_\_\_
- Other (Specify) \_\_\_\_\_

We realize that many persons filling out this questionnaire will feel that merely checking the given alternatives will not adequately express their thoughts on the questions raised. Therefore you are encouraged to write comments.

### PART A—The Public Accounting Profession—1985

1. The CPA's present functions are frequently divided into the attest (opinion), management services, and tax service groupings. Indicate the pattern of development of the practice of public accounting that you foresee for the next twenty or twenty-five years by checking the appropriate columns below:

<u>Function</u>	AMOUNTS OF ANNUAL BILLINGS			PROPORTIONS OF ANNUAL BILLINGS		
	<i>Increase</i>	<i>Decrease</i>	<i>No Change</i>	<i>Increase</i>	<i>Decrease</i>	<i>No Change</i>
	_____	_____	_____	_____	_____	_____
Attest	_____	_____	_____	_____	_____	_____
Mgt. Ser.	_____	_____	_____	_____	_____	_____
Tax Ser.	_____	_____	_____	_____	_____	_____

Comment: [Space was allowed for comments.]

2. The attest function depends upon the existence of standards that permit more or less objective measurements as a basis for opinions.
  - a. Do you believe that satisfactory standards *now* exist for the evaluation of the
    - (1) appropriateness of the *methods* by which management performs its purchasing function?

Yes \_\_\_\_\_  
 No \_\_\_\_\_  
 No opinion \_\_\_\_\_

(2) quality of management performance in functional areas such as purchasing?

Yes \_\_\_\_\_

No \_\_\_\_\_

No opinion \_\_\_\_\_

(3) appropriateness of the *methods* by which top management reaches decisions involving over-all company policies?

Yes \_\_\_\_\_

No \_\_\_\_\_

No opinion \_\_\_\_\_

(4) quality of top management's *decisions* regarding over-all company policies?

Yes \_\_\_\_\_

No \_\_\_\_\_

No opinion \_\_\_\_\_

Comment: [Space was allowed for comments.]

b. Do you believe that CPAs *will* by 1985 extend the attest function into the areas of the

(1) appropriateness of the *methods* by which management performs its purchasing function?

Yes \_\_\_\_\_

No \_\_\_\_\_

No opinion \_\_\_\_\_

(2) quality of management performance in functional areas such as purchasing?

Yes \_\_\_\_\_

No \_\_\_\_\_

No opinion \_\_\_\_\_

(3) appropriateness of the *methods* by which top management reaches decisions involving over-all company policies?

Yes \_\_\_\_\_

No \_\_\_\_\_

No opinion \_\_\_\_\_

(4) quality of top management's *decisions* regarding over-all company policies?

Yes \_\_\_\_\_

No \_\_\_\_\_

No opinion \_\_\_\_\_

Comment: [Space was allowed for comments.]

## PART B—Accounting Education—1985

In answering the following questions assume that they apply to the ideal situation that you think you would like to see in the United States at the end of the next generation—let us say 1985—even though you believe that the changes should be made sooner.

3. This question is concerned with the *accounting* part of the education a student should acquire before entering public accounting. (It is assumed that there is general agreement that (1) a university graduate should have developed the ability to think logically, analyze effectively, and express himself clearly, both orally and in writing, and (2) *all* accountants, regardless of the amount of accounting and other knowledge obtained in the university, should attempt to increase their technical knowledge and ability throughout their careers.)

Immediately upon completion of his university education the typical graduate entering public accounting should be equipped to

*Check  
only one*

- a. apply accounting theory and techniques well enough to practice on his own account as a public accountant; \_\_\_\_\_
- b. apply accounting theory and techniques well enough to be, almost immediately and with minimal supervision, a productive junior staff member of a public accounting firm; \_\_\_\_\_
- c. learn techniques and applications of principles following the date of employment as a junior staff member of a public accounting firm (this option assumes he has learned accounting theory in the university but has had a minimum exposure to techniques and applications of principles); or \_\_\_\_\_
- d. learn accounting theory, applications, and techniques following the date of employment as a staff member of a public accounting firm. \_\_\_\_\_
- e. No opinion \_\_\_\_\_

Comment: [Space was allowed for comments.]

4. Do you think that the university education of public accountants should be offered in a variety of curriculum patterns designed to produce graduates with varying levels of accounting proficiency at the time they complete their university education?

- a. Yes \_\_\_\_\_
- b. No \_\_\_\_\_
- c. No opinion \_\_\_\_\_

Comment: [Space was allowed for comments.]

5. Assuming that an accountant's university education is to cover only accounting theory (with only a minimum of exposure to techniques and applications of principles) and thus equip him to learn techniques and applications of principles following the date of his employment as a staff member of a public accounting firm, do you believe that the education and training he needs between the time he completes his university education and the time he is competent to practice public accounting as a CPA should be provided by (select three by marking them 1, 2 and 3 in the order of their importance)
- a. Self-study? \_\_\_\_\_
  - b. On-the-job training? \_\_\_\_\_
  - c. Formal training classes conducted by the firm? \_\_\_\_\_
  - d. Expansion of AICPA offerings in classroom courses of from one day to two weeks? \_\_\_\_\_
  - e. Night classes in universities? \_\_\_\_\_
  - f. Correspondence courses from
    - (1) AICPA \_\_\_\_\_
    - (2) Universities? \_\_\_\_\_
    - (3) Proprietary schools? \_\_\_\_\_
  - g. Other; specify below

Comment: [Space was allowed for comments.]

6. Should the university education for public accountants differ materially from the university education for

	<i>Assume his study covered</i>	
	<u>4 yrs.</u>	<u>5 yrs.</u>
a. Accounting executives for industry?		
Yes	_____	_____
No	_____	_____
No opinion	_____	_____
b. Nonaccounting executives for industry?		
Yes	_____	_____
No	_____	_____
No opinion	_____	_____

If you have answered either 6a or 6b "yes," please comment on the differences you have in mind.

Comment: [Space was allowed for comments.]

7. Assume for this question that an accounting major, who has been an average scholar in an average member school of the American Association of Collegiate Schools of Business, whose courses have been appro-

privately selected, and who has had 18 to 22 semester hours of accounting, goes to work in public accounting.

- a. If he goes to work for a national firm, do you think he would be a better prospect if he had had

*Assume his study covered*

	<i>4 yrs.</i>	<i>5 yrs.</i>
--	---------------	---------------

More accounting? \_\_\_\_\_ \_\_\_\_\_

Less accounting? \_\_\_\_\_ \_\_\_\_\_

He has had about the right amount of accounting. \_\_\_\_\_ \_\_\_\_\_

- b. If he goes to work for a firm consisting of two or three partners, do you think he would be a better prospect if he had had

*Assume his study covered*

	<i>4 yrs.</i>	<i>5 yrs.</i>
--	---------------	---------------

More accounting? \_\_\_\_\_ \_\_\_\_\_

Less accounting? \_\_\_\_\_ \_\_\_\_\_

He has had about the right amount of accounting. \_\_\_\_\_ \_\_\_\_\_

Comment: [Space was allowed for comments.]

8. Do you think we should plan for the university education of typical public accountants to require (select one answer only)

a. Four-year undergraduate degree? \_\_\_\_\_

b. Five-year undergraduate degree? \_\_\_\_\_

c. Master's degree based on commerce undergraduate degree? \_\_\_\_\_

d. Master's degree based on *any* undergraduate degree? \_\_\_\_\_

e. More than six years? \_\_\_\_\_

f. No opinion \_\_\_\_\_

Comment: [Space was allowed for comments.]

9. a. Do you think we should plan for the culminating portion of the university education of public accountants to be given in professional schools of accountancy?

*If the culminating portion is*

	<i>Undergraduate</i>	<i>Graduate</i>
--	----------------------	-----------------

Yes \_\_\_\_\_ \_\_\_\_\_

No \_\_\_\_\_ \_\_\_\_\_

No comment \_\_\_\_\_ \_\_\_\_\_



The reasons for my positions are as follows:

[Space was allowed for comments.]

- b. If we are to have professional schools of accountancy within the university, do you think they should be located (Please answer this question even if you answered "No" to one or both parts of 9a.)

	<i>If the school is</i>	
	<u>Under</u>	<u>Gradu-</u>
	<u>graduate</u>	<u>ate</u>
Within the colleges of business administration?	_____	_____
Outside the colleges of business administration?	_____	_____
No opinion	_____	_____

Comment: [Space was allowed for comments.]

- c. Should accountants in public practice, industry and government establish an accrediting agency for institutions of higher learning offering a major in accounting?

Yes	_____
No	_____
No opinion	_____

- d. If your answer to 9c is "yes," indicate by checking the appropriate blanks what part, if any, you think each of the following organizations should take in the accreditation process:

	<u>Do the ac-</u>	<u>setting up</u>	<u>Partici-</u>
	<u>crediting</u>	<u>an agency</u>	<u>pate in</u>
			<u>the joint</u>
			<u>operation</u>
			<u>of the</u>
			<u>agency</u>
AICPA	_____	_____	_____
Association of CPA Examiners	_____	_____	_____
American Accounting Association	_____	_____	_____
American Association of Collegiate Schools of Business	_____	_____	_____
Other, please specify:	_____		

10. The *total* university curriculum of entrants into the public accounting profession should be allocated as follows:

	<i>If only four years of college are available</i>	<i>If five years of college are available</i>
	<u>          </u>	<u>          </u>
Arts, sciences, humanities	___% of 4 yrs.	___% of 5 yrs.
Business administration (other than accounting) and advanced eco- nomics	___% of 4 yrs.	___% of 5 yrs.
Accounting	___% of 4 yrs.	___% of 5 yrs.

Comment:           [Space was allowed for comments.]

11. a. How many semester hours of mathematics and statistics should be included in the university education of public accountants?

\_\_\_\_\_

b. What specific elements of mathematics and statistics should be included in the university education of public accountants?

[Space was allowed for comments.]

12. a. Should an internship program be a *required* part of the curriculum for public accountants?

Yes                   \_\_\_\_\_

No                    \_\_\_\_\_

No opinion           \_\_\_\_\_

b. Would an internship program be *desirable* as an elective part of the curriculum for public accountants?

Yes                   \_\_\_\_\_

No                    \_\_\_\_\_

No opinion           \_\_\_\_\_

Comment:           [Space was allowed for comments.]

## Responses to the Questionnaire

---

**PART A—The Public Accounting Profession—1985**

**Question 1** Opinions With Respect to Amounts and Proportions of Annual Billings of Public Accounting Firms in 1985

Function and Change	AMOUNTS				PROPORTIONS			
	<i>Educators</i>	<i>Practitioners</i>	<i>Industrial and Governmental Accountants</i>	<i>Total</i>	<i>Educators</i>	<i>Practitioners</i>	<i>Industrial and Governmental Accountants</i>	<i>Total</i>
Attest:								
Increase	32	19	3	54	2	6	1	9
Decrease	1	1	0	2	23	12	4	39
No change	2	1	3	6	9	2	0	11
No answer	2	1	0	3	3	2	1	6
Management services:								
Increase	36	20	6	62	35	17	5	57
Decrease	0	0	0	0	1	3	1	5
No change	0	0	0	0	0	1	0	1
No answer	1	2	0	3	1	1	0	2
Tax services:								
Increase	32	18	5	55	8	7	4	19
Decrease	1	1	0	2	16	7	1	24
No change	3	1	1	5	10	6	1	17
No answer	1	2	0	3	3	2	0	5

**Question 2a** Opinions With Respect to the Existence of Standards that Permit More or Less Objective Measurements as a Basis for Opinions

	<u>Educators</u>	<u>Practitioners</u>	<u>Industrial and Governmental Accountants</u>	<u>Total</u>
Satisfactory standards <i>now</i> exist for the evaluation of the				
Appropriateness of the <i>methods</i> by which management performs its purchasing function.				
Yes	15	8	4	27
No	20	13	1	34
No opinion	2	1	0	3
No answer	0	0	1	1
Quality of management performance in functional areas such as purchasing.				
Yes	6	0	2	8
No	28	20	3	51
No opinion	3	1	0	4
No answer	0	1	1	2
Appropriateness of the <i>methods</i> by which top management reaches decisions involving over-all company policies.				
Yes	5	2	1	8
No	29	19	3	51
No opinion	3	1	1	5
No answer	0	0	1	1
Quality of top management's <i>decisions</i> regarding over-all company policies.				
Yes	3	1	1	5
No	31	20	4	55
No opinion	3	1	0	4
No answer	0	0	1	1

**Question 2b** Opinions With Respect to Whether CPAs Will by 1985 Extend the Attest Function into New Areas of Management Responsibility

	<u>Educators</u>	<u>Practitioners</u>	<u>Industrial and Governmental Accountants</u>	<u>Total</u>
By 1985 CPAs will extend the attest function into the areas of the				
Appropriateness of the <i>methods</i> by which management performs its purchasing function.				
Yes	26	11	1	38
No	7	6	3	16
No opinion	3	4	1	8
Perhaps	1	1	0	2
No answer	0	0	1	1
Quality of management performance in functional areas such as purchasing.				
Yes	21	7	1	29
No	11	8	3	22
No opinion	4	5	1	10
Perhaps	1	1	0	2
No answer	0	1	1	2
Appropriateness of the <i>methods</i> by which top management reaches decisions involving over-all company policies.				
Yes	20	7	0	27
No	11	10	3	24
No opinion	5	5	2	12
Perhaps	1	0	0	1
No answer	0	0	1	1
Quality of top management's <i>decisions</i> regarding over-all company policies.				
Yes	11	5	0	16
No	17	11	3	31
No opinion	7	6	2	15
Perhaps	2	0	0	2
No answer	0	0	1	1

## PART B—Accounting Education—1985\*

**Question 3** Opinions With Respect to What the Typical Graduate Should Be Equipped to Do Immediately Upon Completion of His University Education†

	<u>Educators</u>	<u>Practitioners</u>	<u>Industrial and Governmental Accountants</u>	<u>Total</u>
a. Apply accounting theory and techniques well enough to practice on his own account as a public accountant	1	1	0	2
b. Apply accounting theory and techniques well enough to be, almost immediately and with minimal supervision, a productive junior staff member of a public accounting firm	16	9	4	29
c. Undecided between "b" and "d"	1	0	0	1
d. Learn techniques and applications of principles following the date of employment as a junior staff member of a public accounting firm (this option assumes he has learned accounting theory in the university but has had a minimum exposure to techniques and applications of principles)	19	12	2	33

\*Respondents were told that they were to assume that all of the questions in Part B applied to the ideal situation that they thought they would like to see in the United States at the end of the next generation—let us say 1985—even though they believed that the changes should be made sooner.

†This question is concerned with the *accounting* part of the education a student should acquire before entering public accounting. (It is assumed that there is general agreement that (1) a university graduate should have developed the ability to think logically, analyze effectively, and express himself clearly, both orally and in writing, and (2) *all* accountants, regardless of the amount of accounting and other knowledge obtained in the university, should attempt to increase their technical knowledge and ability throughout their careers.)

**Question 3 continued**

	<i>Educators</i>	<i>Practitioners</i>	<i>Industrial and Governmental Accountants</i>	<i>Total</i>
e. Learn accounting theory, applications, and techniques following the date of employment as a staff member of a public accounting firm.	0	0	0	0

**Question 4** Opinions With Respect to This Question: Do you think that the university education of public accountants should be offered in a variety of curriculum patterns designed to produce graduates with varying levels of accounting proficiency at the time they complete their university education?

	<i>Educators</i>	<i>Practitioners</i>	<i>Industrial and Governmental Accountants</i>	<i>Total</i>
Yes	18	8	3	29
No	17	11	2	30
No opinion	2	3	1	6

**Question 5** Opinions With Respect to Postgraduate Sources of Education and Training

Assuming that an accountant's university education is to cover only accounting theory (with only a minimum of exposure to techniques and



applications of principles) and thus equip him to learn techniques and applications of principles following the date of his employment as a staff member of a public accounting firm, respondents believed that the education and training he needs between the time he completes his university education and the time he is competent to practice public accounting as a CPA should be provided by (they were to select three by marking them 1, 2 and 3 in the order of their importance)

	<u>Educators</u>			<u>Practitioners</u>			<u>Industrial and Governmental Accountants</u>			<u>Total</u>		
	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>
	Self-study	2	5	8	3	5	8	0	0	2	5	10
On-the-job training	18	9	3	16	4	2	2	1	2	36	14	7
Formal training classes conducted by the firm	11	16	5	1	15	3	3	2	0	15	33	8
Expansion of AICPA offerings in classroom courses of from one day to two weeks	4	5	11	1	4	5	1	1	0	6	10	16
Night classes in uni- versities	1	4	4	1	0	2	0	0	2	2	4	8
Correspondence courses from												
(1) AICPA	0	1	2	0	1	0	0	2	0	0	4	2
(2) Universities	0	1	1	0	1	0	0	0	0	0	2	1
(3) Proprietary schools	0	0	1	0	1	1	0	0	0	0	1	2
Individuals who did not answer												2

**Question 6** Opinions as to Whether the Education for Public Accountants Should Differ Materially From That of Accounting and Nonaccounting Executives for Industry

	<u>Educators</u>		<u>Practitioners</u>		<u>Industrial and Governmental Accountants</u>		<u>Total</u>	
	<u>4 years of college*</u>	<u>5 years of college*</u>	<u>4 years of college*</u>	<u>5 years of college*</u>	<u>4 years of college*</u>	<u>5 years of college*</u>	<u>4 years of college*</u>	<u>5 years of college*</u>
It should differ from that for accounting executives for industry.								
Yes	4	12	5	11	0	1	9	24
No	33	25	16	10	6	5	55	40
No opinion	0	0	0	1	0	0	0	1
Shouldn't cover 4 years	0	0	1	0	0	0	1	0
It should differ from that for non-accounting executives for industry.								
Yes	29	33	13	15	3	4	45	52
No	7	3	7	6	3	2	17	11
No opinion	1	1	1	1	0	0	2	2
Shouldn't cover 4 years	0	0	1	0	0	0	1	0

\*The number of years of college indicates the assumption (as to the number of years of college the entrant into public accounting would have) under which the indicated answers were given.

**Question 7** Opinions With Respect to Adequacy of 18 to 22 Semester Hours of Accounting as Preparation for a Public Accountant\*

	Educators		Practitioners		Industrial and Governmental Accountants		Total	
	4 years of college	5 years of college	4 years of college	5 years of college	4 years of college	5 years of college	4 years of college	5 years of college
More accounting	13	22	4	14	2	1	19	37
Less accounting	10	4	2	0	0	0	12	4
He has had about the right amount of accounting	14	11	12	5	4	5	30	21
No answer	0	0	4	3	0	0	4	3
More accounting	18	24	8	15	3	1	29	40
Less accounting	6	3	1	1	0	0	7	4
He has had about the right amount of accounting	12	9	10	4	3	5	25	18
No answer	1	1	3	2	0	0	4	3

If he goes to work for a national firm, he would be a better prospect if he had had

More accounting  
 Less accounting  
 He has had about the right amount of accounting  
 No answer

If he goes to work for a firm consisting of two or three partners, he would be a better prospect if he had had

More accounting  
 Less accounting  
 He has had about the right amount of accounting  
 No answer

\*Respondents were told to assume for this question that an accounting major, who has been an average scholar in an average member school of the American Association of Collegiate Schools of Business, whose courses have been appropriately selected, and who has had 18 to 22 semester hours of accounting, goes to work in public accounting.

†The number of years of college indicates the assumption (as to the number of years of college the entrant into public accounting would have) under which the indicated answers were given.

**Question 8** Opinions With Respect to the Appropriate Plan for the University Education of the Typical Public Accountant

	<u>Educators</u>	<u>Practitioners</u>	<u>Industrial and Governmental Accountants</u>	<u>Total</u>
Four-year undergraduate degree?	2	2	3	7
Five-year undergraduate degree?	7	6	0	13
Master's degree based on commerce undergraduate degree?	10	5	2	17
Master's degree based on <i>any</i> undergraduate degree?	14	7	1	22
More than six years?	0	0	0	0
No opinion	0	2	0	2
No answer	4	0	0	4

**Questions 9a and 9b Opinions With Respect to Professional Schools of Accountancy**

	Educators		Practitioners		Industrial and Governmental Accountants		Total	
	Under-graduate*	Graduate*	Under-graduate*	Graduate*	Under-graduate*	Graduate*	Under-graduate*	Graduate*
a. The culminating portion of the university education of public accountants should be given in professional schools of accountancy.								
Yes	3	14	6	13	2	3	11	30
No	30	21	12	4	4	3	46	28
No opinion	3	2	3	5	0	0	6	7
No answer	1	0	0	0	0	0	1	0
Should be no 4-year degrees	0	0	1	0	0	0	1	0
b. If we are to have professional schools of accountancy within the university, they should be located:								
Within the colleges of business administration	25	24	14	13	5	5	44	42
Outside the colleges of business administration	5	11	3	5	0	0	8	16
No opinion	2	0	5	4	1	1	8	5
"Opposed under any circumstances"	2	0	0	0	0	0	2	0
No answer	3	2	0	0	0	0	3	2

\*The "Undergraduate"—"Graduate" designations indicate the assumptions, as to the level of the culminating portion, under which the respondents gave their answers.

**Questions 9c and 9d** Opinions With Respect to Accreditation of Accounting Curricula

	<u>Educators</u>	<u>Practitioners</u>	<u>Industrial and Governmental Accountants</u>	<u>Total</u>								
c. Accountants in public practice, industry and government should establish an accrediting agency.												
Yes	14	12	1	27								
“Yes, if accountants in education are added to the groups”	1	0	0	1								
“Yes, if accounting educators do it”	1	0	0	1								
No	19	7	2	28								
No opinion	2	3	3	8								
d. If their answers to 9c were “Yes,” respondents thought the following organizations should take the indicated parts in the accreditation process:												
	<u>1*</u>	<u>2*</u>	<u>3*</u>	<u>1*</u>	<u>2*</u>	<u>3*</u>	<u>1*</u>	<u>2*</u>	<u>3*</u>	<u>1*</u>	<u>2*</u>	<u>3*</u>
American Institute of CPAs	0	6	10	1	7	7	0	0	1	1	13	18
Association of CPA Examiners	0	1	9	1	2	4	0	0	0	1	3	13
American Accounting Association	1	4	12	0	6	5	0	0	0	1	10	17
American Association of Collegiate Schools of Business	8	2	7	2	0	8	0	0	1	10	2	16
Federal Government Accountants Association	0	0	1	0	0	1	0	0	0	0	0	2
Financial Executives Institute	0	0	1	1	0	0	0	0	0	1	0	1
A new agency	1	0	0	0	0	0	0	0	0	1	0	0

\*Columns have the following significance:  
 Col. 1. “Do the accrediting.”  
 Col. 2. “Take the lead in setting up an agency.”  
 Col. 3. “Participate in the joint operation of the agency.”

**Question 10** Opinions of Educators With Respect to Apportionment to Major Subject Areas of the Curriculum for Public Accountants

	PER CENT OF THE CURRICULUM												
	<i>No</i> <i>Answer</i>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>	<u>50</u>	<u>55</u>	<u>60</u>	<i>Over</i> <u>60</u>
<b>Four years of college:</b>													
Arts and sciences								5	1	17	1	10	3
Business administration and advanced economics			3	4	14	10	3	3					
Accounting		3	9	12	11	1	1						
<b>Five years of college:</b>													
Arts and sciences							1	10	4	10	4	4	4
Business administration and advanced economics		1	4	4	10	12	3	1	1	1			
Accounting		1	7	9	9	9	1	1					

**Question 10** Opinions of Practitioners With Respect to Apportionment to Major Subject Areas of the Curriculum for Public Accountants

	PER CENT OF THE CURRICULUM												
	<i>No</i> <i>Answer</i>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>	<u>50</u>	<u>55</u>	<u>60</u>	<i>Over</i> <u>60</u>
<b>Four years of college:</b>													
Arts and sciences	2							1		13	3	3	
Business administration and advanced economics	2		2	1	12	5							
Accounting	2		2	7	8	2	1						
<b>Five years of college:</b>													
Arts and sciences	2							6		10	2	2	
Business administration and advanced economics	2	1		3	5	10	1						
Accounting	2	1	2	6	2	6	2	1					

**Question 10** Opinions of Industrial and Governmental Accountants With Respect to Apportionment to Major Subject Areas of the Curriculum for Public Accountants

	PER CENT OF THE CURRICULUM												
	<i>No</i> <i>Answer</i>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>	<u>50</u>	<u>55</u>	<u>60</u>	<i>Over</i> <u>60</u>
Four years of college:													
Arts and sciences	1			1	2								2
Business administration and advanced economics	1					1	2	1					1
Accounting	1		1	1	1								2
Five years of college:													
Arts and sciences	1			2				1	1	1			
Business administration and advanced economics	1			1		2	1	1					
Accounting	1			2	1				1				1

**Question 10** Opinions of All Respondents With Respect to Apportionment to Major Subject Areas of the Curriculum for Governmental Accountants

	PER CENT OF THE CURRICULUM												
	<i>No</i> <i>Answer</i>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>	<u>50</u>	<u>55</u>	<u>60</u>	<i>Over</i> <u>60</u>
Four years of college:													
Arts and sciences	3			1	2			6	1	32	4	13	3
Business administration and advanced economics	3		5	5	27	17	4	3		1			
Accounting	3	3	12	20	20	3	2			2			
Five years of college:													
Arts and sciences	3			2			1	17	5	21	6	6	4
Business administration and advanced economics	3	2	4	8	15	24	5	2	1	1			
Accounting	3	2	9	17	12	15	3	2	1				1



**Question 11a** Opinions With Respect to the Number of Hours of Mathematics and Statistics that Should Be Included in the University Education of Public Accountants

<u>Number of Semester Hours</u>	<u>Educators</u>	<u>Practitioners</u>	<u>Industrial and Governmental Accountants</u>	<u>Total</u>
27	0	1	0	1
24	4	0	0	4
21	1	0	0	1
18	1	2	0	3
15	11	4	0	15
12	14	6	2	22
9	3	2	3	8
6	1	2	1	4
No opinion	0	2	0	2
No answer	2	3	0	5

**Question 11b** Opinions With Respect to the Mathematics and Statistics Topics that Should Be Included in the University Education of Public Accountants

	<u>Educators</u>	<u>Practitioners</u>	<u>Industrial and Governmental Accountants</u>	<u>Total</u>
Analytical geometry	7	6	1	14
Trigonometry	3	6	0	9
Algebra	16	14	1	31
Linear algebra	11	0	0	11
Matrix algebra	11	1	0	12
Elementary calculus	7	8	0	15
Calculus	14	4	1	19
Actuarial science	1	2	0	3
Mathematics of finance	2	3	1	6
Standard statistical techniques	10	0	2	12
Quality control	1	0	0	1
Distributions	4	0	0	4
Index numbers	3	0	0	3

**Question 11b continued**

	<u>Educators</u>	<u>Practitioners</u>	<u>Industrial and Governmental Accountants</u>	<u>Total</u>
Correlation	5	0	0	5
Variances	5	0	0	5
Regression analysis	5	0	0	5
Probability	19	3	0	22
Sampling	13	2	2	17
Time series	6	0	0	6
Statistical inference	7	0	0	7
Set theory	8	0	0	8
Game theory	2	0	0	2
Decision theory	1	1	0	2
Finite mathematics	10	1	0	11
Vector analysis	3	0	0	3
Mathematics for linear programming	2	0	0	2
Mathematics for computers	4	0	0	4
Operations research	4	0	0	4
Model building	5	0	0	5
Stochastic process	2	0	0	2
Bayes theory	1	0	0	1
La Grange multipliers	1	0	0	1
Z transformation	1	0	0	1
Integral [calculus]	3	0	0	3
Differential [calculus]	2	0	0	2
Graphics	1	0	0	1
Applied [mathematics]	10	2	0	12
Sufficient for operations research or business decisions	2	0	0	2
No opinion	7	6	4	17

**Question 12** Opinions With Respect to Internships

	<u>Educators</u>	<u>Practitioners</u>	<u>Industrial and Governmental Accountants</u>	<u>Total</u>
<b>An internship program should be a <i>required</i> part of the curriculum for public accountants.</b>				
Yes	1	5	1	7
No	36	14	4	54
No opinion	0	3	1	4
<b>An internship program would be <i>desirable</i> as an elective part of the curriculum for public accountants.</b>				
Yes	25	17	4	46
No	11	2	1	14
No opinion	0	2	1	3
No answer	1	1	0	2



