

TEACHING BOOKKEEPING IN CLASS A SCHOOLS  
IN THE STATE OF TEXAS

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A THESIS

Presented to the Faculty of  
Sam Houston State Teachers College  
in Partial Fulfillment of the Requirements

for the Degree

MASTER OF ARTS

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by

Lloyd T. Dickens

Huntsville, Texas

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### Purpose

It was the purpose of this study to use information obtained from teachers of bookkeeping and employers of bookkeeping graduates in order to evaluate the teaching methods used in the instruction of bookkeeping on the secondary level in Class A schools in the State of Texas in order to make recommendations for improvement.

### Methods

The methods and procedures used to obtain data for this study were: (1) a review was made of the historical development of bookkeeping; (2) books, bulletins, pamphlets and theses were used as source material; (3) a questionnaire was sent to every Class A school in the State of Texas; and (4) personal interviews with businessmen in the East Texas area. *Source data*

### Findings

NO: 5

On the basis of the information obtained in this study the following suggestions appear to be in order:

1. Teachers should use great care in selecting the methods and approaches to be used in teaching bookkeeping.

2. For the students to have a full and rich experience in bookkeeping it is necessary for them to use field trips to local businesses and have businessmen visit the classrooms.

3. The special content of a bookkeeping course should include income taxes for the individual and small businessman, bookkeeping for the sole proprietor, and bookkeeping and budgeting for the family. Content in general should be varied to fit the locale.

4. Teachers should emphasize these objectives: develop an understanding of business terms and forms, give experience in recording activities of a business, familiarize students with financial statements and teach them to interpret such information as is furnished in financial statements. They should emphasize those personal traits which are desirable for occupational adjustment and everyday living.

5. School and community situations should be used to familiarize students with record keeping of social and civic organizations.

6. Each teacher when choosing a method or methods to be used in teaching bookkeeping should consider first the abilities and needs of his students.

7. A part-time work program should be promoted for the business students in their senior year.

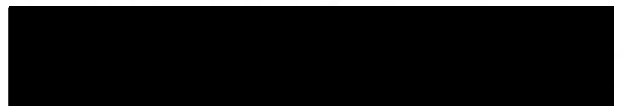
8. Schools should encourage a higher degree of accuracy in bookkeeping courses.

9. Bookkeeping teachers should be urged to use audio-visual aid equipment by being trained by in-service programs and supervision by the school administrators. Audio-visual aids should be provided and used extensively in teaching bookkeeping.

10. Schools should include a business machine course in the curriculum if at all possible; otherwise it should be carefully integrated with bookkeeping.

11. Follow-up studies should be made from time to time as a basis for making revisions in the methods of teaching bookkeeping.

Approved:

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## ACKNOWLEDGMENT

I would like to express my sincere appreciation to the members of my graduate committee for their time, patience, and consideration shown me during the preparation of this work. I would like to give special thanks to Dr. Loyce Adams, Chairman of the Graduate Committee, for her patience, encouragement, and the use of her storehouse of knowledge on the subject matter.

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## CHAPTER I

### STATEMENT OF THE PROBLEM

#### Introduction

The growth in stature of the accounting profession during the twentieth century has magnified the need for further refinements of accounting concepts and for greater clarity in methods used in the teaching of bookkeeping. Teachers have not remained indifferent to the challenge. The validity and applicability of the methods used are constantly being re-examined in the light of changing conditions. It is perhaps safe to predict that the teachers will continue to be responsive to both internal and external criticism and that improvements in methods will continue to occur in the future. As progress has been made in the past to provide us with our present methods of teaching, it is our responsibility to look forward to and stay abreast with the teaching methods by experimenting with new and different equipment and by having a better understanding of the learning processes.

The desire of every bookkeeping teacher should be to do a better job of teaching and preparing students for their future responsibilities. It is the future of our students that encourages teachers to look for new and better methods of teaching bookkeeping. New teaching methods are essential if we, as teachers, are to impart the quality and quantity of

information that the students of today must obtain to meet the demands of our future society. The progress to be made in teaching methodology is limited only by our unconcern, inability, and unwillingness to apply our knowledge.

### Statement of the Problem

No: 1 ✓

The methods of teaching bookkeeping have had many individual variations. These have been enlarged upon, coordinated, and developed to bring about present practices and procedures in the teaching of bookkeeping. It is the intentions of this study to investigate and evaluate the information obtained from schools and businessmen in Class A schools of Texas, as to the methods used by teachers of bookkeeping and the competencies attained by their students. This is to be done in order to evaluate present methods of teaching bookkeeping and to make recommendations for improvements.

### Purpose of the Study

No: 3 ✓

The purpose of this study is to use the information obtained from teachers of bookkeeping and employers of bookkeeping graduates in order to evaluate the teaching methods used in the instruction of bookkeeping on the secondary level in Class A schools in the State of Texas, and to arrive at recommendations for improvement.

Limitations of the Study

NO. 2

This report will not cover all methods of teaching bookkeeping due to the voluminous amount of material available and the time involved. There may also be instructors required to use other methods and materials by their own school administration. Further, there are several very good textbooks on methods of teaching bookkeeping.

Methods and Procedures of Investigation

NO. 4

The following methods and procedures were used in obtaining data for this study: (1) a review was made of the historical development of bookkeeping from its beginning to the present time; (2) books, bulletins, pamphlets and theses in the Sam Houston and Stephen F. Austin State College libraries were used as source material; (3) a questionnaire was sent to every Class A school in the State of Texas to obtain information as to the methods used in teaching bookkeeping; (4) personal interviews with business men in the East Texas area were conducted in order to secure their views on what can be done in public schools to better equip the high school graduate in the field of bookkeeping.

Summary

The growth of the accounting profession has enlarged to the point that accounting concepts and methods used in teaching

bookkeeping must be re-examined in the light of changing conditions and progress made to improve our present methods. The methods will improve through the use of new and different equipment and by having a better understanding of the learning processes. The progress to be made in teaching methodology is limited only by our unconcern, inability, and unwillingness to apply our knowledge.

The purpose of this study is to obtain information from Class A schools of Texas and businessmen in order to evaluate present methods of teaching bookkeeping and to make recommendations for improvements. Secondary data was obtained from reviewing of books, bulletins, pamphlets, and theses. Primary data came from a questionnaire sent to Class A schools and personal interviews with businessmen.

## CHAPTER II

### THE HISTORICAL DEVELOPMENT OF BOOKKEEPING

#### Bookkeeping in the Schools

The study of the historical background of the accounting profession is much more than a mere exercise in research. We cannot understand our present position fully without having some idea of how we got there. The background of the development of an accounting method or principle is often quite important in determining its scope or application.<sup>1</sup>

The notched stick, which later developed into the wooden tally, is perhaps the first accounting aid ever employed in the history of man.<sup>2</sup>

The Babylonians, Egyptians, and Romans all followed a similar form of bookkeeping. Babylonian clerks used tablets of clay for their ledger sheets which were filed in tightly closed jars. The record-keeper initialed his posting by pressing a fingernail into the unbaked clay. Probably the Egyptians originated the custom of posting losses in red-- their papyrus records contain entries written in both red and black ink. Ledgers have been discovered that date from four

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<sup>1</sup>Morton Backer, Handbook of Modern Accounting Theory (70 Fifth Avenue, New York: Prentice-Hall, Inc., 1955), pp. 9-10.

<sup>2</sup>Anaias Charles Littleton and B. S. Yamey, Studies in the History of Accounting (Homewood, Illinois: Richard D. Irwin, Inc., 1956), p. 75.

hundred years before the christian era. As a result of taxation the Romans prepared books that would reveal the extent of their resources and the property owned.<sup>3</sup>

The first written exposition of the principles of double-entry bookkeeping was included in Pacioli's famous treatise, Everything About Arithmetic, Geometry, and Proportion, published in 1494.

Pacioli's method of bookkeeping was greatly improved by the advent of Hindu-Arabic numerals into Italy. Previously Italian books never balanced because amounts were written in Roman numerals. This progress dates from the years immediately preceding the discovery of America when England adopted the system prescribed by Pacioli, "The Italian or Double-entry Methods of Accounts." As bookkeeping developed with trade, one system of record-keeping had to be defended against others, and the Italian system triumphed. In 1789, Benjamin Booth published the first model set of books in England, and this was the forerunner of the modern practice set used in America. Bookkeeping appeared in the curriculum of the Boston English High School in 1824. In 1817, the Massachusetts legislature enacted a law which required every municipal group of 500 or

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<sup>3</sup>Gray, Guy James, "A Study of Present Conditions in Business Teaching and a Plan for its Improvement" (unpublished Master's thesis, Stephen F. Austin State College, Nacogdoches, Texas, 1950), pp. 64-66.

more families to have a high school which had to offer bookkeeping as one of its subjects.<sup>4</sup>

Bookkeeping has always been the crux of the orthodox business-education program. In recent years several systems of bookkeeping have been developed and have won recognition among the business education instructors in the United States.

Probably the lack of textbooks which was characteristic of the early period brought about a strong and permanent emphasis on the idea of "learning to do by doing." This lack of textbooks also fostered the idea of "practice sets" which were designed to carry the student through the entire bookkeeping cycle. This procedure usually resulted in wearying details of recording transactions with little chance of studying the general results. Students were impressed with the necessity for understanding why the method was used. The course was, therefore, narrowly occupational rather than broadly educational in its nature.<sup>5</sup>

As bookkeeping has progressed through the years the vocational objectives have changed from time to time. However, the bookkeeping teacher needs to know not only the broad purposes and aims of his course but also the specific outcomes

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<sup>4</sup>Harvey A. Andruss, Ways to Teach Bookkeeping and Accounting (Cincinnati, Ohio: South-Western Publishing Company, 1943), pp. 2-3.

<sup>5</sup>Hary D. Kitson, Commercial Education in Secondary Schools (Dallas, Texas: Ginn and Company, 1929), pp. 40-45.

that are to be achieved. According to Musselman there are seven objectives that must be kept in mind during the bookkeeping course and these are as follows:<sup>6</sup>

1. To provide experiences to determine the student's interest in and aptitude for bookkeeping and accounting as an occupation.

Accounting and bookkeeping work requires certain characteristics and abilities for success in the business field and these requirements should be made clear to the students who desire to specialize in accounting. The business courses which precede the bookkeeping course should provide the students with information about their own aptitudes and interests. Also, the vocational guidance program should be a good source of information that can be used in the guidance of students toward a field that is best suited for them.

2. To develop an understanding of the common business terms and forms.

Terms and forms are the tools a worker must understand to be adequately prepared to perform work of the business world.

3. To develop skills in applied arithmetic and handwriting which are essential to recording activities.

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<sup>6</sup>Vernon A. Musselman and J. Marshall Hanna, Teaching Bookkeeping and Accounting (Dallas, Texas: McGraw-Hill Book Company, Inc., 1960), pp. 11-15.

There is a close relationship between arithmetic and bookkeeping and this can be shown by the fact that the fundamental accounting equation expresses a mathematical relationship. The concept of debits and credits is in reality nothing more than addition and subtraction. It should also be remembered that good handwriting is essential to all recording activities.

4. To develop an understanding of fundamental principles, procedures, and forms in bookkeeping as applied to records for both service and trading types of business.

To fulfill this objective, the course should develop an understanding of (a) the purpose of records in business, (b) the bookkeeping equation and its relation to accounts and bookkeeping procedures, (c) the types of accounts and their functions, (d) the steps in the bookkeeping cycle, (e) the purposes and functions of books of original entry and books of final entry, and (f) the sources of data for bookkeeping entries.

5. To develop an understanding of, and to provide practice in, the various ways that common recording activities are carried on in business.

The student should be given an opportunity to include the handling of cash, payroll records, invoice and sales forms and records, inventory records, and petty cash records. They should also have experience with the single-entry and double-entry systems of bookkeeping.

6. To develop familiarity with the kinds of data shown on the business statements and to interpret the changes reflected by these data.

This objective is not only to stress the preparation of financial statements but also the interpretation of these statements as to what information is available and how that information may be used to give direction to business activities.

7. To emphasize and develop those personal traits which are desirable for successful occupational adjustment and living.

It is every teacher's responsibility to emphasize desirable personal traits and provide students with a wide variety of experiences which require cooperative planning and working. Many workers lose their positions or are not promoted because they are non-cooperative, careless, dishonest, discourteous, tactless, or unable to work with others.

### The Classical Greek Period

It must be explained that it was among the Greeks, and as late as the sixth century B.C., that coined money came into general use for the first time in human history. The adoption of money as the normal medium of valuation and exchange made it possible for bookkeeping to rise to an entirely new level. All possessions and all transactions could at last be recorded not as so many fields, so many slaves, so many bushels of grain, or the exchange of so many casks of wine against so many pounds of silver, but in every case as so many units of a particular system of currency. All possessions and transactions, then, could be so recorded; but it does not by any means follow that in practice they always were. Although the Greeks and Romans usually did reduce all items in their accounts to a common monetary denominator, they often failed to do so. Property might still be hoarded in

kind, and reckoned in public or private accounts simply as measures of wheat or units of a foreign currency, instead of being expressed in terms of the prevailing monetary system.<sup>7</sup>

### Roman Accounting

Improvements in methods of accounting during the Roman period, when they do appear, are not consistently maintained and are confined to isolated papyru or groups of papyri. Three such improvements are worth special attention. In a few accounts from Roman Egypt we find certain small items of expenditure described by present terms as "petty cash." However, this does not mean that the modern notion of petty cash, which can be spent as such without detailed explanation, has become a regular feature of Graeco-Roman accounting. The papyri in question are exceptional, and the more usual practice is still to insert separately every individual disbursement. Again, in at least one papyrus, of the first century, we find what must be cross-references to another account. But the presence of cross-references in the papyrus does not imply that the account it contains was in any way integrated with others in a unified system of accounts. This was a stage of development which ancient accounting never reached, even if occasionally two or more individual accounts are found to be

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<sup>7</sup>Ananias Charles Littleton and B. S. Yamey, Studies in the History of Accounting (Homewood, Illinois: Richard D. Irwin, Inc., 1956), pp. 21-27.

connected in one way or another. The third and most interesting of the advances in accounting method which are observable in the Roman period is the adoption of the bilateral form, dating from the years 191-192 and contained in a papyrus roll having forty-seven columns of writing, each of which must be a little under four inches wide.<sup>8</sup>

### Modern Bookkeeping

The journal multiplied in names and in usefulness; and cashbooks, sales journals, and purchase journals were perfected through necessity. The ledger was broken into general accounts, accounts receivable, accounts payable, and so on. The original "book" had become as many books as are necessary to permit quick access to any class of accounts by as many people as a business required.

Bookkeepers continued to post to the "books" until a young nation arose on the western shores of the Atlantic. The first American contribution was the "Safeguard" or "Boston" ledger. It was ruled to provide for as many as 25 accounts on a single page. A volume offered facilities for recording and proving entries for an entire year. It was a notable contribution.

In 1887 a New England bookkeeper conceived the idea of putting her accounts on cards. Her employer, the Library

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<sup>8</sup>Ibid., pp. 33-38.

Bureau, manufactured and sold indexes; but it scoffed at her suggestion as unorthodox and unsafe, and only reluctantly consented to a change. In six months the tradition-defying bookkeeper had proved the rightness of her plan, and her employer inaugurated a promotional program that altered methods of accounting to some extent.

A year later William Vawter, a Chicago printer, perfected the first practical loose-leaf binder. He, too, dealt tradition a heavy blow. But powerful influences fought to retain the mystery that huge accounting volumes fostered, and it took years for bookkeeping to become universally understandable.

At last came the principle of visible control. James H. Rand, a country banker in New York, working with his ledgers after banking hours, began to consider the problem of quicker location of accounts. He developed a "Visible" binder, then pocket visibility, which we know as "Kardex" today. It was speed he sought at first; but it was control he discovered along with speed, for visible signalling rapidly became an instrument of management that gave the ledger outstanding usefulness and opportunities.<sup>9</sup>

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<sup>9</sup>Harvey A. Andruss, Ways to Teach Bookkeeping and Accounting (Cincinnati, Ohio: South-Western Publishing Company, 1943), pp. 5-7.

### Automation

Automation has made many complex changes in some business organizations. For many years such labor-saving machines and procedures as punch-card accounting systems, payroll machines, bookkeeping machines, and photographic systems have been available. Automation has and will continue to reduce the amount of routine clerical work involved in keeping records. This is especially true with large business organizations where the volume of work involved justifies the high expense of the machines required. Millions of small businesses employing only one or two office workers cannot profitably use expensive automatic recording machines within their organization because of the expense and unqualified personnel. Automation does not decrease the volume of records to be maintained; however, it makes more and better records available at a faster rate of speed. The evidence to date does not indicate that the trend toward automation in office work will decrease the employment opportunities in bookkeeping and accounting; nor will it decrease the need for an understanding of the basic principles of records.<sup>10</sup>

Every high school with an alert bookkeeping teacher is fully aware of the bookkeeping-machine employment needs of the surrounding communities. Each school that is now offering a

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<sup>10</sup>Musselman, op. cit., pp. 7-9.

good one-year bookkeeping course is already giving basic preparation for machine-bookkeeping training. Few, if any students, are ready for machine-bookkeeping training without first having had basic training in the principles and skills of manual bookkeeping. Since only a few high schools can afford financially and justify educationally a special bookkeeping-machine course it is believed that for most high schools machine-bookkeeping training is not yet feasible.

Every high school should strive to give the vocational training that most of its vocational graduates will need and use. Most bookkeepers need and use skills on the common office machines such as the typewriter, adding and calculating machines. Putting first things first, most high schools should move in the direction of training on these more commonly used office machines before offering their bookkeeping students training on the specialized, advanced types of bookkeeping or billing-computing machines. It might be worth remembering that employers of machine bookkeepers today prefer operators who understand manual bookkeeping and the underlying principles of bookkeeping. There will always be a need for interpreters of machine-bookkeeping results. Machine bookkeeping has not as yet eliminated the steps in a bookkeeping cycle or the need for people to understand them. It has, however, produced a trend with which all bookkeeping teachers should keep abreast.<sup>11</sup>

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<sup>11</sup>Lewis Delano Boynton, Methods of Teaching Bookkeeping (Cincinnati, Ohio: South-Western Publishing Company, 1955), pp. 386-88.

The number of bookkeepers and accountants for the year 1960 was 1,413,096 compared to 1,124,008 in 1950. This is an increase of 289,088 within a ten-year period. It is quite evident that there should be a considerable increase in the number of accounting workers because of: (1) the increasing complexity of our present-day tax structure, (2) the need for an increased number of records, and (3) the evolution of complex data processing equipment has made it possible to secure data for tax purposes and for prediction of business in general that has not been previously available.<sup>12</sup>

### Higher Education

Business schools had won strong positions on the campuses of most public universities and many of the larger private institutions by 1948. Enrollments increased spectacularly immediately after the war, and leveled off in line with other fields in the early fifties. Another rise in enrollment is expected in the sixties. Of 107 undergraduate schools answering a Survey Questionnaire in 1957, three-fourths expected their enrollments to rise by 40 per cent or more between 1956 and 1970 while nearly a third expected them to more than double. The big question is whether qualified teachers can be found in sufficient numbers.

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<sup>12</sup>Herbert A. Tonne, "Trends in Business Occupations in the 1960's," Journal of Business Education, XXXVIII Number 8 (May 1963), pp. 314-316.

After World War II new courses and majors in such fields as human relations, managerial economics, market research, and forecasting were established. By the postwar period, six subjects constituted most of the core work and most of the areas of major concentration as well: accounting, economics, finance, management, marketing, and production. Business law and statistics were the other two subjects that made up the rest of the core program at most schools, though they were relatively unimportant as majors.<sup>13</sup>

Even though this study is limited only to the training of the high school bookkeepers it is felt that the Certified Public Accountants should be mentioned. The American Institute of Certified Public Accountants has contributed much to accounting education through research activities and by stimulating thinking in the area of accounting principles. To a considerable extent the teaching of accounting has been directly influenced by certification requirements in many states.

Management has recognized the necessity and importance of accounting in the field of business and has shifted this responsibility, in most cases to the Certified Public Accountants. These accountants are highly trained in the knowledge and understanding of the accounting principles and it is upon their shoulders that rest the decisions of many businesses.<sup>14</sup>

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<sup>13</sup>Frank Cook Pierson, The Education of American Businessmen (New York: McGraw-Hill Book Company, Inc., 1959), pp. 50-51.

<sup>14</sup>Ibid., pp. 361-366.

### Summary

There should be an understanding of the historical development of bookkeeping in order to fully grasp the significance history has played in determining the scope and application of our present bookkeeping system.

The Babylonian clerks were accustomed to initialing their posting by pressing a fingernail into the ledger of unbaked clay, while the Egyptians were probably the first to post their losses in red--their papyrus records contain entries written in both red and black ink. Also, the Romans, as a result of taxation, prepared books that would disclose the extent of their resources. These methods would be considered an advancement in bookkeeping from the primitive methods of notched sticks and wooden tallies.

The first writing on double-entry bookkeeping was published in Pacioli's famous treatise Everything About Arithmetic, Geometry, and Proportion. This method was later known as "The Italian or Double-entry Methods of Accounts." Then, in 1789 Benjamin Booth published the first model set of books in England which was the forerunner of the modern practice set used in America today.

The bookkeeping teacher should know not only the broad purposes and aims of his course but also the specific objectives to be achieved. These objectives should be: (1) to determine the student's interest in and aptitude for bookkeeping and accounting as an occupation, (2) develop an

understanding of business terms and forms, (3) develop skills in applied arithmetic and handwriting, (4) provide an understanding of the fundamental principles and procedures of bookkeeping, (5) give experience in the recording activities of a business, (6) familiarize the students with financial statements and teach them to interpret this information, and (7) emphasize those personal traits which are desirable for occupational adjustment and everyday living.

The first of four American contributions to the improvement of bookkeeping came through the use of the "Safeguard" or "Boston" ledger. Then, in 1887 a New England bookkeeper conceived the idea of putting the accounts on cards. The third improvement was made by William Vawter, a Chicago printer, who perfected the first practical loose-leaf binder. The fourth was the "Visible" binder or "Kardex" as we know it today. The "Kardex" method was initiated by James H. Rand, a country banker in New York, and it was his first intention to speed up the method of locating accounts, but he soon found that not only did he succeed in getting speed but also control.

Automation has made many changes in large businesses. However, it must be remembered that automation does not decrease the volume of records to be maintained and only makes better records available at a faster rate of speed. Small businesses employing only one or two office workers cannot financially afford such expensive equipment, nor would they have qualified personnel to operate such equipment.

Within a ten-year period, from 1950 to 1960, there was an increase of 289,088 bookkeepers. Due to the complexity of our present tax structure and the need for an increased number of records, it is evident there should be a considerable increase in the number of accounting workers needed.

Immediately after World War II there was a tremendous increase in the number of business students as compared with student increases in other fields of study. However, this trend leveled off in the early fifties. Another rise in enrollment is expected in the sixties. A survey has shown that from 1957 to 1970 colleges are expecting an increase in enrollment from 40 per cent to more than double.

## CHAPTER III

### BOOKKEEPING IN 68 CLASS A TEXAS SCHOOLS

#### Aims and Methods of Teaching Bookkeeping

Many schools because of their size, limited enrollment, and the type of community that they serve cannot educationally or financially justify more than one year of bookkeeping instruction. To offer a strictly or predominately vocational second-year course to three or four qualified students whom the community might absorb into such vocational employment often is not possible or feasible. Many other schools offer only one year of bookkeeping by choice rather than necessity. Their philosophy underlying this choice is that the high school can benefit the student better by giving him a well-rounded general education than by having him spend a second year in a specialized vocational area. Some educators say that just as there was a trend away from three- and four-year bookkeeping courses in high school several decades ago there is a trend today toward offering only one year of high school bookkeeping.<sup>1</sup>

Of the 71 schools completing the questionnaire for this study, 68 offered one-year bookkeeping, none offered two-year bookkeeping, and three did not offer a bookkeeping course.

The knowledge of debits and credits and the worship of the trial balance as the end of bookkeeping instructions are

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<sup>1</sup>Lewis Delano Boynton, Methods of Teaching Bookkeeping (Cincinnati, Ohio: South-Western Publishing Company, 1955), pp. 20-22.

a very small part of what modern teachers expect from bookkeeping. The teacher will recognize that debits, credits, and figures are merely tools through which the business values are conveyed.

According to Andruss, the most important aims or special contents in the teaching of bookkeeping are as follows:<sup>2</sup>

1. Bookkeeping should be taught to assist all members of society in the business of living. For example, it should assist the following people:

- (a) The home owner and the housewife as they operate a budget.
- (b) The average citizen who is a member of a church, club, lodge, etc., who may become a record-keeper official for the organization.
- (c) The average citizen who, through a study of bookkeeping, gains a better understanding of business services and is therefore better qualified to use those services efficiently.
- (d) The citizens who made investments and are aided in their investment program by an understanding of bookkeeping methods and records.
- (e) The citizens who need to understand the relationship of business to governmental problems, such as the problem of taxation and the problem of financing governmental subdivisions.

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<sup>2</sup>Harvey A. Andruss, Ways to Teach Bookkeeping and Accounting (Cincinnati, Ohio: South-Western Publishing Company, 1943), pp. 61-62.

2. Bookkeeping should be taught also for vocational purposes, that is, to assist members of society in making a living. For example, it should have vocational value for the following people:

- (a) Farmers, professional men, and proprietors of small businesses, who keep their own records.
- (b) Those who are to be employed as bookkeepers.
- (c) Those who, although not bookkeepers, are engaged in business in such a way that future promotion is more likely if they have the knowledge of bookkeeping.
- (d) Those who intend to take advanced training in accounting.

These aims were included in the questionnaire sent to schools, and the following information was obtained. The number of schools teaching bookkeeping and budgeting for the family and individual use was 50 or 73.52 per cent of the 68 schools reporting; 40 or 58.82 per cent taught bookkeeping and budgeting for the record-keeper of schools and social organizations; 47 or 69.12 per cent taught bookkeeping to help the professional man; 37 or 54.41 per cent taught bookkeeping to help the farmer; 65 or 95.59 per cent taught bookkeeping for the sole proprietor; 50 or 73.52 per cent taught bookkeeping for a partnership; 41 or 60.29 per cent taught bookkeeping for a corporation, and 58 or 85.29 per cent taught income taxes for the individual and small businessman. Of the 58 schools teaching income tax, four indicated they used material received from the Internal Revenue. For a list of the schools and the areas covered in bookkeeping see Table I.

TABLE I

THE NUMBER AND PERCENTAGE OF 68 CLASS A TEXAS SCHOOLS  
OFFERING SPECIAL CONTENT IN THE BOOKKEEPING COURSE

Content	Number	Per Cent
Family Bookkeeping	50	73.52
School and Social	40	58.82
Professional Man	47	69.12
Farmer	37	54.41
Sole Proprietor	65	95.59
Partnership	50	73.52
Corporation	41	60.29
Income Tax	58	85.29

### Adjusting and Reversing Entries

Adjusting entries are entries that are made at the end of a fiscal period to bring various accounts up to date while reversing entries are entries made at the beginning of a new fiscal period to reverse certain adjusting entries that were recorded at the end of a preceding period. In adjusting the merchandise inventory you bring the merchandise inventory figures as they are in the books into agreement with those of the physical inventory taken at the end of the fiscal period. The inventory may be adjusted by one of five methods: (1) closing the beginning inventory into the purchases account and then recording the new inventory by debiting inventory and crediting purchases; (2) closing both the beginning inventory and the amount of the purchases directly to the profit and loss summary and recording the new inventory by debiting inventory and crediting profit and loss; (3) adjusting the merchandise inventory by debiting or crediting for an amount sufficient to increase or decrease it to its true value and taking the offsetting debit or credit to profit and loss summary; (4) doing the same as in (3) but through purchases; and (5) opening a cost of goods sold account and adjusting inventory through that, the balance of the cost of goods sold going finally to profit and loss.

In teaching adjusting and reversing entries the teacher should emphasize "why" adjusting and reversing entries are made. This would give the students a better understanding

as to what will take place in the adjusting and reversing of these accounts.

Of the 68 schools offering bookkeeping in this study 57 or 83.82 per cent taught adjusting and reversing entries for accrued expenses, while 55 or 80.88 per cent taught adjusting and reversing entries for accrued income. Schools teaching adjusting and reversing entries for prepaid expenses was 56 or 82.35 per cent, while the teaching of adjusting and reversing entries for prepaid income was only 44 or 64.70 per cent. Adjusting the valuation account was taught by 55 schools or 80.88 per cent, whereas, the number of schools teaching the adjusting of the merchandise inventory was 63 or 92.64 per cent.

For a complete list of the schools teaching adjusting and reversing entries see Table II.

### Methods Used in Teaching Bookkeeping

A number of specific methods are sound for use in teaching bookkeeping. No one method can be said to be the best; nor should any one method be used entirely. The effective teacher will vary his method to suit the abilities of his students or the type of subject-matter being studied. In teaching the adjustments of the financial statements perhaps the discussion method might prove to be the most beneficial, while in teaching the trial balance the problem method might be the most effective. In any event it is wise

TABLE II

THE NUMBER AND PERCENTAGE OF 68 CLASS A TEXAS SCHOOLS  
TEACHING ADJUSTING AND REVERSING ENTRIES

Content	Number	Per Cent
Accrued Expenses	57	83.82
Accrued Income	55	80.88
Prepaid Expenses	56	82.35
Prepaid Income	44	64.70
Valuation Account	55	80.88
Merchandise Inventory	63	92.64

to adapt the method to fit the situation at hand; the successful teacher will be able to sense when it is proper to change methods.

### Discussion Method

The class discussion method can be used to great advantage, especially in the teaching of the "why" of bookkeeping. Many problem situations can be developed from either an actual or an imaginary condition and presented to the class for the purpose of illustrating the problems involved in the record keeping for a business.

Most businessmen will speak freely about their bookkeeping problems if the teacher will explain the reasons for inquiring. The teacher will often receive many valuable illustrations that can be used in the classroom discussions.

### Problem-and-Project Method

Bookkeeping is a course that is highly adaptable to the problem or project method of teaching. The short exercises or problems found at the ends of chapters in the textbooks are almost mandatory for the learning of theory and mechanics of bookkeeping. The use of longer problems or projects in the form of practice sets is also highly valuable.

The teacher must also be careful, in using the problem technique, not to give too much aid to students in solving

problems to the point that the student does not have an opportunity to weigh judgments or make decisions for himself.

### Individual Instruction

In large classes the teacher may find it necessary to give individual instruction to members of the class because of the wide range of abilities commonly found in the bookkeeping class. The procedure is to assign problems for the students to work in class. If the teacher, while giving individual help, observes a number of students having the same difficulty, then time is taken out to make the relevant concept clear.<sup>3</sup>

### Teacher-Explanation-Demonstration Method

Under this plan all new subject matter is presented and explained to the class before it is studied by the students. After the explanation of several new principles one or more sample problems should be worked on the chalkboard, showing the application of these principles. Not until the teacher is certain that the students have the necessary background to do the work with success and satisfaction will they be given assigned textbook reading or problems.

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<sup>3</sup>Lloyd Virgil Douglas, Teaching Business Subjects (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1958), pp. 256-259.

This instructional plan has several advantages;<sup>4</sup>

1. It gives the students confidence. They turn to their textbook reading and problem work with a feeling of assurance.
2. It uses the textbook as a teaching aid, not as the major instructional medium. The textbook becomes a reference source and supplements the class presentation.
3. It centers upon the teacher the responsibility for teaching.
4. It permits the use of sound teaching principles. Bookkeeping works and terms may be related to student experiences, new meaningful experiences provided, concepts dramatized, and principles visualized. The course can be kept largely on the "experience level" as opposed to the "verbalized level."
5. It places a premium on understanding as opposed to memorization. Copying is discouraged because students have confidence in the ability to do the work on their own.

The major disadvantage of this method is that it does not provide for individual differences. If the course is geared for the fast students then the slow students will fall behind and get discouraged. If it is geared for the slow students then the more able students will become discouraged and will not have the challenge necessary to do good work.

#### Individual Study Method

Under this method the teacher moves from desk to desk helping each individual. The students proceed at their own

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<sup>4</sup>Vernon A. Musselman and J. Marshall Hanna, Teaching Bookkeeping and Accounting (Dallas, Texas: McGraw-Hill Book Company, Inc., 1960), pp. 55-56.

rate of speed. Should several students need help at one time then the teacher would call upon some of the better students to help the slower ones. A correspondence course is similar to this method except that in the correspondence course the student does not have a teacher to consult when help is needed.

### Group-Unit Method

Under this method students are seated in groups of comparable ability and are allowed to work together. However, each group may be working on a different problem or unit. When a group finishes a unit it is tested over that unit and if the students pass they are permitted to proceed to the next unit. This method is consistent with the following educational principles:<sup>5</sup>

1. Learning is an individual matter, but it takes place most efficiently and effectively in a social setting.

2. Freedom is important in the teaching-learning process.

3. Recognition of progress is essential to continued behavior, which results in learning.

The classroom, under the group method must be equipped with the type of furniture that will permit students to sit in groups of four to six students.

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<sup>5</sup>Ibid.

### Programed Method

The material used in a programed course is not made by the teacher; it may take the time of two or more professional educators and psychologists over a period of months or years to prepare a course in a particular subject. This material is then placed in a teaching machine or mechanical device which can be operated easily by a student. The cost and complexity of teaching machines can be from the simple and inexpensive to the complex and costly. However, most of them have the following characteristics in common:<sup>6</sup>

1. Material is arranged in a sequence of exact questions to which the learner responds overtly, usually by selecting, manipulating, or writing in answers.
2. The learner will know immediately if he is right or wrong.
3. The student is allowed to progress at his own pace and is free of the speed of the classroom group.
4. Information is presented in such a way that it leads him forward logically from step to step which requires his complete attention.

The use of teaching machines is not restricted to upper-level subjects and pupils.

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<sup>6</sup>Walter Arno Wittich and Charles Francis Schuller, Audio-Visual Materials: Their Nature and Use (New York: Harper and Brothers, 1962), pp. 464-469.

It should be kept in mind that all schools in this study used more than one method of teaching. The number of schools using the discussion method was 49 or 72.06 per cent of the 68 schools; 61 or 89.71 per cent used the problem-and-project method; 45 or 66.18 per cent used the individual instruction method; 63 or 92.65 per cent used the teacher explanation-demonstration method; 29 or 42.65 per cent used the individual study method; 17 or 25.00 per cent used the group unit method, and one or 1.47 per cent used the programmed method.

For a listing of schools and their methods of teaching see Table III.

### Special Approaches to Teaching Bookkeeping

There are six special approaches to be considered in teaching bookkeeping. The use of these approaches is usually left to the discretion of the individual teacher. Teachers may use different approaches because of the variations in class groups. One group may be taught successfully with one approach while another group will respond more to another approach.

#### Single Entry Approach

When using the "single entry" method the journal does not distinguish between debits and credits by position as it does in double entry. The "single entry" method usually

TABLE III

THE NUMBER AND PERCENTAGE OF 68 CLASS A TEXAS SCHOOLS USING  
METHODS INDICATED IN THE TEACHING OF BOOKKEEPING

Method	Number	Per Cent
Discussion	49	72.06
Problem-and-Project	61	89.71
Individual Instruction	45	66.18
Teacher Explanation-Demonstration	63	92.65
Individual Study	29	42.65
Group-Unit	17	25.00
Programed	1	1.47

provides enough data for constructing a balance sheet. However, it is difficult to prepare a profit and loss statement without making a detailed analysis of the journals. Any system of bookkeeping that is not a complete double-entry system could be called a single-entry system. The single entry system is rarely taught in schools of today. Many organizations and individuals use the single-entry method of keeping books.<sup>7</sup>

### Journal Approach

The "journal" approach proceeds from the simple debit and credit transaction to the more complex entries by recording such transactions in chronological order of occurrence in a book of original entry known as the "journal." The greatest danger in the use of this approach is the rote, mechanical way of teaching to which it leads. It must be remembered that a set rule is meaningless unless the reasoning behind the rule is made clear; therefore, the reasoning ability must be developed from the beginning. Critics of the approach contend that it frequently fails to develop reasoning as the student is forced to rely too much on memory and becomes an automaton.

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<sup>7</sup>Herbert Arthur Tonne, Methods of Teaching Business Subjects (New York: Gregg Publishing Company, 1949), pp. 244-245.

### Account Approach

The "account" approach method in bookkeeping follows the same basic pattern as does the journal approach except that all entries are recorded directly into the ledger. Many of the advantages of the journal method are also present under this method; however, it is less mechanical in nature. By the use of the "account" approach the effect of transactions on proprietorship is more fully developed. The most frequent criticism of this method is that there is an over-emphasis on rule learning and bookkeeping terminology.

### Balance Sheet or Equation Approach

This approach provides for a direct analysis through the balance sheet of the proprietorship status and the effects that various transactions have upon this proprietorship. The balance sheet should be introduced immediately to form the basis for the logical presentation of the bookkeeping principles. The business teacher might employ several variations of this method. For example, he may decide to present the balance sheet accounts first for a thorough analysis and then turn to the balance sheet, the journals, and the handling of business papers. This technique may be varied to teach the balance sheet and its significance first and then to analyze accounts, the journals, and the handling of business papers. The "balance sheet" approach is considered by many the easiest and quickest way to present clearly and forcefully the

fundamentals of bookkeeping and their application. Arguments frequently used against the "balance sheet" approach are that it is too difficult to understand on the high school level, it lessens the opportunity for individualized work, and that the terminology is introduced too rapidly. Inexperienced teachers will find this method more difficult to use because a thorough knowledge of bookkeeping and accounting is needed for effective presentation.<sup>8</sup>

### The "How" and "Why" Approaches

One fault of most bookkeeping teachers is that too much emphasis is placed on the "how" rather than the "why" approach. Teachers will emphasize "how" bookkeeping records are kept rather than "why" certain transactions are recorded as they are. By putting the emphasis on "how" the teacher is in reality training a bookkeeper. It is doubtful that a bookkeeping course in high school can be justified by this emphasis alone. If a student can comprehend the reasons for recording certain transactions then he has obtained more important value than if he had learned only the mechanics of maintaining a set of bookkeeping records.<sup>9</sup>

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<sup>8</sup>Stephen J. Turille, Principles and Methods in Business Education (19 West Frederick Street, Staunton, Virginia: McClure Printing Company, 1949), pp. 240-242.

<sup>9</sup>Lloyd Virgil Douglas, Teaching Business Subjects (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1958), p. 355.

Of the 68 schools using these special approaches, 18 or 26.47 per cent used the "single entry" approach; 41 or 60.29 per cent used the "journal" approach; 38 or 55.88 per cent used the "account" approach; 62 or 91.18 per cent used the "balance sheet or equation" approach; 32 or 47.06 per cent used the "why" approach; and 29 or 42.06 per cent used the "how" approach.

It should be kept in mind that these percentages are based on each approach and in most instances each school used several approaches. For a complete list of schools and the approaches they use see Table IV.

### Testing

Examinations for determining student achievement in bookkeeping can be placed into several categories; namely, publishers' tests, problem tests, teacher-prepared tests, and open-book tests. Publishers' tests are usually of an objective nature containing questions of the true-false, multiple-choice, and completion type, and they are very comprehensive. These tests are usually supplied free of charge by the publisher of the textbook to teachers who are using the text. These tests are easy to use since the teacher does not have to prepare the material and in most cases the tests are well developed.

Teacher-prepared tests can be either in the form of problems or the objective type similar to the published tests.

TABLE IV

THE NUMBERS AND PERCENTAGE OF 68 CLASS A TEXAS SCHOOLS USING  
SPECIAL APPROACHES INDICATED IN THE TEACHING OF BOOKKEEPING

Approach	Number	Per Cent
Single Entry	18	26.47
Journal	41	60.29
Account	38	55.88
Balance Sheet or Equation	62	91.18
Why	32	47.06
How	29	42.06

Grading is the main difficulty in the use of problem type tests. The teacher is faced with what to do if an error is made by the student in an early part of the problem that will cause subsequent errors in the final answer. This difficulty may be eliminated by counting off only once for an error that may affect later parts of the problem. By following this procedure it will be necessary for the teacher to follow each error through the entire problem. This obviously brings about a careful analysis of each error and, consequently, takes a great deal of time.

The subjective type tests are rarely used in determining achievement in a bookkeeping course. The reasons for this are the lack of objectivity and the time required in grading. However, this type of test has great value, especially in determining whether or not students understand the "why" of bookkeeping and for this reason subjective type tests should be considered.<sup>10</sup>

As to the types of tests used by the schools considered in this study, 62 schools or 91.18 per cent used the publishers' test; 60 or 88.24 per cent used the problem test; 60 or 88.24 per cent used the teacher objective test; 27 or 39.71 per cent used the subjective test, and 25 or 36.76 per cent used the open-book test.

For a list of the schools and the types of tests used by them see Table V.

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<sup>10</sup>Ibid., pp. 380-383.

TABLE V

THE NUMBER AND PERCENTAGE OF 68 CLASS A TEXAS SCHOOLS  
USING TYPES OF TESTS INDICATED IN BOOKKEEPING

Test	Number	Per Cent
Publishers'	62	91.18
Problem	60	88.24
Teacher-Objective	60	88.24
Subjective	27	39.71
Open-Book	25	36.76

### Use of Community Resources

It is generally acknowledged that the classroom alone does not and cannot provide a full and rich experience for studying bookkeeping. The student who is restricted only to textbooks and classroom activities is greatly limited in his understanding of bookkeeping in his community and world today. The number of schools in this study using community situations to familiarize students with record keeping of social and civic organizations was 40 or 70.59 per cent; 32 or 47.06 per cent used field trips to local businesses; 19 or 27.94 per cent had visits to the classroom by local businessmen; and four or 5.88 per cent had part-time cooperative work experience for students.

### Charts and Practice Sets

The practice sets used in teaching bookkeeping today have proven to be of great value. Sixty-eight or 100 per cent of the schools in this study used practice sets with business papers; 19 or 27.94 per cent used practice sets without business papers; 38 or 55.88 per cent used publishers' charts, and 11 or 16.18 per cent used other material such as films, business forms from local businesses, home-made posters, income tax material furnished by the Internal Revenue Service, and workbooks. The schools also used an average of 3.22 practice sets per school year. The lowest number of practice sets used by a school was one and the highest ten. See Table VI for these percentages.

TABLE VI

THE NUMBER AND PERCENTAGE OF 68 CLASS A TEXAS SCHOOLS USING  
SITUATIONS AND METHODS INDICATED IN TEACHING BOOKKEEPING

Situations and Methods	Number	Per Cent
School and Community situations to familiarize students with record keeping of social and civic organizations	40	70.59
Field trips to local businesses	32	47.06
Visits to the Classroom by local businessmen	19	27.94
Part-time cooperative work experience for students	4	5.88
Publishers' charts	38	55.88
Practice sets with business papers	68	100.00
Practice sets without business papers	19	27.94
Other	11	16.18

### Audio-Visual Aids

Audio-visual aids are coming more and more into prominence in the teaching of high school bookkeeping. Their value has been proven to numerous bookkeeping teachers. In addition to posters, charts, and visible displays such as blackboard illustrations, the use of motion pictures, silent and sound, is playing an increasingly important role in providing effective training. The slidefilm, as a teaching device in bookkeeping, is highly recommended.<sup>11</sup>

Teachers should teach through the eyes of their students as well as through their ears. Students learn more readily when they "see" what is being taught than when they merely "hear" the teacher's instructions. This is the reason for the emphasis now being placed on audio-visual education. Teachers frequently give oral explanations without visual assistance because it takes less effort to talk than it does to write on the chalkboard or to use some other visual aid. Oral explanations may be understood by only a small part of the class, whereas they might be grasped by the entire class if they were accompanied by chalkboard illustrations or by other visual aids.<sup>12</sup>

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<sup>11</sup>Stephen J. Turille, Principles and Methods in Business Education (19 West Frederick Street, Staunton, Virginia: McClure Printing Company, 1949), p. 244.

<sup>12</sup>Carroll Anthony Nolan, Principles and Problems of Business Education (Cincinnati, Ohio: South-Western Publishing Company, 1958), p. 416.

Shown below are data pertaining to schools with audio-visual equipment available and the schools using this equipment in their bookkeeping classes.

Fifty-nine schools or 86.76 per cent had 16mm film projectors available, while only 27 or 39.71 per cent used this equipment in their classes; one or 1.47 per cent had a Dry Mounting Press and this one was used in the class; 28 or 41.18 per cent had opaque projectors and only seven or 10.29 per cent used the opaque projectors; 54 or 79.41 per cent had film strip projectors and 12 or 17.65 per cent used this equipment; 26 or 38.24 per cent had a Thermo-Fax Copying machine and four or 5.88 per cent used this machine; four or 5.88 per cent had a Proto-Printer and three or 4.41 per cent used the Proto-Printer; 15 or 22.06 per cent had overhead projectors and five or 7.35 per cent used the projectors; 57 or 83.82 per cent had a mimeograph machine available and 29 or 42.65 per cent used this machine; 65 or 95.59 per cent had adding machines and 44 or 64.71 per cent used these adding machines; 30 or 44.12 per cent had calculators and 13 or 19.12 used the calculators in their classes; two or 2.94 per cent had posting machines available but these were not used by the bookkeeping classes.

See Table VII for a complete breakdown on the schools having audio-visual equipment available and the schools that use this equipment in teaching bookkeeping.

TABLE VII

THE NUMBER AND PERCENTAGE OF 68 CLASS A TEXAS SCHOOLS  
HAVING AUDIO-VISUAL AID EQUIPMENT AVAILABLE AND  
USING THIS EQUIPMENT IN TEACHING BOOKKEEPING

Visual Aid Equipment	<u>Available</u>		<u>Used in Bookkeeping</u>		
	Number	Per Cent	Number	Per Cent of 68	Per Cent of Schools with Equipment Available
16 mm Film Projector	59	86.76	27	39.71	45.76
Dry Mounting Press	1	1.47	1	1.47	100.00
Opaque Projector	28	41.18	7	10.29	25.00
Film Strip Projector	54	79.41	12	17.65	22.22
Thermo-Fax Copying Machine	26	38.24	4	5.88	15.38
Proto-Printer	4	5.88	3	4.41	75.00
Overhead Projector	15	22.06	5	7.35	33.33
Mimeo graph Machine	57	83.82	29	42.65	50.88
Adding Machine	65	95.59	44	64.71	67.69
Calculator	30	44.12	13	19.12	43.33
Posting Machine	2	2.94	0	00.00	00.00

The following information was obtained from a Texas Education Agency sponsored visual aid workshop held in Austin, Texas, during the months of June and July, 1962. This information should instill upon the reader's mind the importance of visual aids in the teaching of bookkeeping or any other subject matter. The purpose of teaching is to transmit ideas or information from one person to another and for that person to retain as much information as possible. The illustrations below demonstrate the ability of the students to retain information by the use of several methods.

THE ABILITY OF LEARNERS TO RETAIN  
THE INFORMATION STUDIED

10% OF WHAT THEY READ

20% OF WHAT THEY HEAR

30% OF WHAT THEY SEE

50% OF WHAT THEY SEE AND HEAR

70% OF WHAT THEY SAY AS THEY TALK

90% OF WHAT THEY SAY AS THEY DO A THING!

	METHODS OF INSTRUCTION	RECALL 3 HOURS LATER	RECALL 3 DAYS LATER
A	TELLING WHEN USED ALONE	70%	10%
B	SHOWING WHEN USED ALONE	72%	20%
C	WHEN A BLEND OF TELLING AND SHOWING IS USED	85%	65%

### Textbooks Used

Of the 68 schools used in this study, 61 or 89.71 per cent used 20th Century Bookkeeping and Accounting by Carlson; Seven or 10.29 per cent used Bookkeeping and Accounting by Freeman, and none used Introductory Bookkeeping by Zelliot-Leidner.

### Summary

As there was a trend away from three-and four-year bookkeeping courses in the high schools several decades ago, today there is a trend toward offering only one year of bookkeeping. Of the 71 schools used in this study 68 offered one-year bookkeeping, none offered two-year bookkeeping, and three did not offer a bookkeeping course.

The important aims in teaching bookkeeping should be to assist the home owner and housewife, citizens who make investments, citizens with tax problems, farmers, professional men, proprietors of small businesses, those employed as bookkeepers, and those who intend to take advanced training in bookkeeping.

The methods used in teaching bookkeeping which are discussed in this chapter are: discussion, problem-and-project, individual instruction, teacher-explanation-demonstration, individual study, group-unit, and programed method. It should be remembered that no one method can be said to be the best nor should any one method be used entirely. The effective

teacher will vary his methods to the needs of his students and to the subject matter he is teaching. The approaches used with these methods include the single entry, journal, account, balance sheet or equation, how, and why approach. The use of these approaches is generally left to the discretion of the individual teacher. Different approaches may be used under various conditions.

The use of testing is to evaluate the performance or material retained by the student. In bookkeeping this is usually achieved by the use of publishers' tests, problem tests, teacher-prepared tests, and open-book tests.

The use of community resources is vitally important in providing a full and rich experience for student bookkeepers. Students who are limited only to textbooks and classroom activities are restricted in their understanding of bookkeeping. In most cases businessmen are willing to furnish the bookkeeping teacher with materials that can be used in the bookkeeping class, visit the classrooms, and furnish part-time cooperative work for the students. They may also make recommendations that might help the teacher in preparing the students for a bookkeeping position in the community.

Audio-visual aids are coming more and more into prominence in teaching bookkeeping. The ability of the student to retain information that has been presented by audio-visual aids is far above that which the student could retain by reading or hearing a discussion.

## CHAPTER IV

### SURVEY OF BUSINESSMEN

One of the most persistent occupational trends in the United States is the growing demand for workers with increased general education and advanced technical and professional training. Many business concerns look upon a college degree as a minimum requirement for employment in positions that lead to the more attractive types of work such as accounting.

As the chapter will point out, businesses are beginning to require more advanced training in bookkeeping for their employees. Thus, the responsibility and burden of teaching bookkeeping on a higher level and requiring better performance from the students are placed squarely upon the bookkeeping teacher. Teachers should point out that in order to advance in the bookkeeping field, a graduate should further his knowledge beyond the high school level.

This survey was conducted in the cities of Baytown, Lufkin, Henderson, Kilgore, and Longview, Texas. This included 17 businesses large and small with bookkeeping employees ranging in number from one to eight. See Appendix B for a review of the questions used in this survey and a listing of the businesses and their locations.

From these businessmen an effort was made to acquire information pertinent to the improvement of teaching bookkeeping in high schools. One of the obstacles of this survey was to

locate businesses hiring high school graduates for bookkeepers. Approximately three out of every four businesses contacted had employed bookkeepers with qualifications higher than those of a high school graduate or had turned their books over to a public accountant or an accounting firm.

There was a total of 42 high school graduates in these 17 businesses and of this number six or 14.29 per cent were required to make adjusting and reversing entries for accrued expenses, accrued income, prepaid expenses, prepaid income and adjusting entries for valuation accounts, and merchandise inventory; six or 14.29 per cent apparently had been adequately prepared by the high school to make the above adjusting and reversing entries. Of the six required to make adjusting and reversing entries only three of these had been adequately trained in high school, while three had to be trained on the job; 11 or 26.19 per cent were required to make a trial balance, while ten or 23.80 per cent were adequately trained by the high school to make a trial balance; nine or 21.43 per cent were required to make a work sheet, profit and loss statement and balance sheet. Only eight of these or 19.05 per cent were properly prepared by the high schools to perform these duties; 30 or 71.14 per cent were required and were adequately trained to reconcile a bank statement, handle payroll records, and solve miscellaneous problems on their own; ten or 23.80 per cent use the Thermo-Fax copying machine; nine or 21.43 per cent use the mimeograph machine; 36 or 85.71 per cent use the

adding machine; none could use a calculator satisfactorily, and five or 11.90 per cent use the posting machine satisfactorily.

When recommendations for improving the qualifications of the high school graduates were mentioned, eight of the 17 businessmen recommended a machine course to teach students how to use the adding machine, calculator, and posting machine; seven suggested on-the-job training which would be of great value to the students and would be of some value to the businesses; four recommended the schools encourage a higher degree of accuracy in bookkeeping; two suggested the use of more practice sets; two suggested teaching the students to identify a debit from a credit; one suggested teaching the students to be neat in their work; and one suggested teaching the students how to look for errors.

One of the most interesting interviews was with Mr. R. L. Farrar, former student and graduate of Sam Houston State and now Chief Auditor for Sears, Roebuck and Company of Longview, Texas. Mr. Farrar made the comment that the public schools could and should improve the qualifications of high school graduates in bookkeeping by teaching the students how to use office equipment and stressing accuracy in the bookkeeping courses.

Summary

From a survey of 17 businessmen in five cities information was obtained pertinent to the improvement of teaching bookkeeping in high schools. However, one obstacle encountered in this survey was to locate businesses hiring high school graduates for bookkeepers. Approximately three out of every four businesses contacted had employed bookkeepers with qualifications higher than those of a high school graduate, or had made other arrangements for their bookkeeping.

Eight of the 17 businessmen recommended a machine course to teach students how to use the adding machine, calculator, and posting machine; seven suggested on-the-job training; four recommended the schools encourage a higher degree of accuracy in bookkeeping; two suggested the use of more practice sets; two suggested teaching the students to identify a debit from a credit; one suggested teaching the students to be neat in their work, and one suggested teaching the students how to look for errors.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

#### Summary

The purpose of this study was to use information obtained from teachers of bookkeeping and employers of bookkeeping graduates to evaluate the methods used in teaching bookkeeping in Class A schools of Texas.

The methods used to obtain data in this study were the review of books, bulletins, pamphlets and theses in the Sam Houston and Stephen F. Austin State College libraries, a questionnaire to all Class A schools in the state of Texas, and personal interviews with businessmen in the East Texas Area.

Audio-visual aids are coming more and more into prominence in teaching bookkeeping. The ability of the student to retain information that has been presented by audio-visual aids is far above the ability of the student to retain information read or heard in a discussion.

The use of community resources is vitally important in providing a full and rich experience for student bookkeepers. Students who are limited only to textbooks and classroom activities are restricted in their understanding of bookkeeping. In most cases businessmen are willing to furnish the bookkeeping teacher with materials that can be used in the bookkeeping

class, visit the classrooms, and furnish part-time cooperative work for the students. They may also make recommendations that might help the teacher in preparing the students for a bookkeeping position in the community.

From a survey of 17 businessmen in five cities information was obtained pertinent to the improvement of teaching bookkeeping in high schools. However, one obstacle encountered in this survey was to locate businesses hiring high school graduates for bookkeepers. Approximately three out of every four businesses contacted had employed bookkeepers with qualifications higher than those of a high school graduate or had made other arrangements for their bookkeeping.

### Conclusions

No. 5

The following conclusions are made on the basis of the information obtained in this study:

1. Schools in this study apparently vary subject matter content to fit community situations and needs. Over two-thirds of the schools included the following: bookkeeping for the sole proprietor, income tax for the individual as well as the small businessman, bookkeeping and budgeting for the family, and partnership bookkeeping.
2. Most schools in this study include adjusting and reversing entries.

3. The four most prominent methods used by schools in this study in teaching bookkeeping are: teacher explanation-demonstration, problem-and-project, discussion, and individual instruction method.

4. The three major approaches used by schools in this study in teaching bookkeeping are: journal, account, and balance sheet or equation approach.

5. The three types of tests used most often by schools in this study in teaching bookkeeping are: publishers' tests, problem tests, and objective tests.

6. Fewer than half of the schools used field trips and class visitation by local businessmen. This is considered by the writer to be a weakness in instructional methods.

7. A large percentage of schools do not have enough audio-visual aid equipment available for use in teaching bookkeeping in high school. Not enough of the schools having equipment available use it in teaching bookkeeping.

8. When audio-visual aid equipment is used students can retain a higher percentage of the material presented.

9. In general businessmen felt that high school prepared bookkeepers should have gotten better training. Accuracy should have been emphasized more.

### Recommendations

The following recommendations are made on the basis of the information obtained in this study:

1. The special content of a bookkeeping course should include income taxes for the individual and small businessman, bookkeeping for the sole proprietor, and bookkeeping and budgeting for the family. Bookkeeping for the farmer should be taught in the rural schools, and bookkeeping for a corporation should be taught in the large towns and cities.

2. Teachers should emphasize these objectives: develop an understanding of business terms and forms, give experience in recording activities of a business, familiarize students with financial statements and teach them to interpret such information as is furnished in financial statements. They should emphasize those personal traits which are desirable for occupational adjustment and everyday living. They should carry the bookkeeping cycle through adjusting, closing, and reversing entries.

3. School and community situations should be used to familiarize students with record keeping of social and civic organizations.

4. Teachers should use great care in selecting the methods and approaches to be used in teaching bookkeeping. It should be remembered that no one method can be said to be the best nor should any one method be used entirely. Each teacher when choosing a method or methods to be used in teaching bookkeeping should consider first the abilities and needs of his students.

5. For the students to have a full and rich experience in bookkeeping it is necessary for them to use field trips to local businesses and have businessmen visit the classrooms.

6. A part-time work program should be promoted for the business students in their senior year.

7. Schools should encourage a higher degree of accuracy in bookkeeping courses.

8. Bookkeeping teachers should be urged to use audio-visual aid equipment by being trained by in-service programs and supervision by the school administrators.

9. Audio-visual aids should be provided by the schools and used extensively in teaching bookkeeping.

10. Schools should include a business machine course in the curriculum if at all possible; otherwise machine instruction should be carefully integrated with bookkeeping.

11. Follow-up studies should be made from time to time as a basis for making revisions in the methods of teaching bookkeeping.

## BIBLIOGRAPHY

- Andruss, Harvey A. Ways to Teach Bookkeeping and Accounting. Ohio: South-Western Publishing Company, 1943.
- Backer, Morton. Handbook of Modern Accounting Theory. New York: Prentice-Hall, Inc., 1955.
- Boynton, Lewis Delano. Methods of Teaching Bookkeeping. Ohio: South-Western Publishing Company, 1955.
- Douglas, Lloyd Virgil. Teaching Business Subjects. New Jersey: Prentice-Hall, Inc., 1958.
- Gray, Guy James. "A Study of Present Conditions in Business Teaching and a Plan for its Improvement." Unpublished Master's thesis, Stephen F. Austin State College, Nacogdoches, Texas, 1950.
- Kitson, Mary D. Commercial Education in Secondary Schools. Dallas, Texas: Ginn and Company, 1929.
- Littleton, Charles Ananias, and B. S. Yamey. Studies in the History of Accounting. Homewood, Illinois: Richard D. Irwin, Inc., 1956.
- Musselman, Vernon A, and J. Marshall Hanna. Teaching Bookkeeping and Accounting. Dallas, Texas: McGraw-Hill Book Company, Inc., 1960.
- Nolan, Carroll Anthony. Principles and Problems of Business Education. Cincinnati, Ohio: South-Western Publishing Company, 1958.
- Pierson, Frank Cook. The Education of American Businessmen. New York: McGraw-Hill Book Company, Inc., 1959.
- Tonne, Herbert A. Methods of Teaching Business Subjects. New York: Gregg Publishing Company, 1949.
- Tonne, Herbert A. "Trends in Business Occupations in the 1960's," Journal of Business Education, XXXVIII Number 8 (May 1963), 314-316.
- Turille, Stephen J. Principles and Methods in Business Education. Staunton, Virginia: McClure Printing Company, 1949.
- Wittich, Walter Arno, and Charles Francis Schuller. Audio-Visual Materials: Their Nature and Use. New York: Harper and Brothers, 1962.

## APPENDIX A

June 28, 1963

Dear Sir:

You are a busy man I know, but please take a little time to aid a fellow principal!

Enclosed is a questionnaire concerning the methods used in teaching bookkeeping on the secondary level. This information will be used in a thesis the aim of which is to make recommendations to improve the methods of teaching bookkeeping.

If you will pass this information to the bookkeeping teacher and ask that he take a few minutes of his time to complete this questionnaire and return it I shall greatly appreciate it. I realize that since this is summertime this may mean mailing the questionnaire and envelope. The questionnaire is designed so that only a minimum of time will be required for its completion and only check marks in the appropriate places will be necessary.

The envelope is enclosed for convenience in returning this information. Since a prompt reply is needed please don't put this off until tomorrow!

Yours very truly,

Lloyd T. Dickens  
Jr. High Principal

## Questionnaire for Schools

- I. \_\_\_\_\_ (Name of School).
- II. Is bookkeeping offered in your school? (yes\_\_\_no\_\_\_)  
If yes, how many units?\_\_\_\_ If no, please return the questionnaire without further explanation.
- III. Show in the blanks below the class enrollment for each of the courses offered in your school.  
1. Bookkeeping I \_\_\_\_\_ 2. Bookkeeping II \_\_\_\_\_
- IV. Check the item or items you teach in your bookkeeping course.  
 1. \_\_\_\_\_ Adjusting and reversing entries for accrued expenses.  
 2. \_\_\_\_\_ Adjusting and reversing entries for accrued income.  
 3. \_\_\_\_\_ Adjusting and reversing entries for prepaid expenses.  
 4. \_\_\_\_\_ Adjusting and reversing entries for prepaid income.  
 5. \_\_\_\_\_ Adjusting entries for valuation accounts.  
 6. \_\_\_\_\_ Adjusting entries for merchandise inventory.
- V. Check the special content that your bookkeeping courses include.  
 1. \_\_\_\_\_ Bookkeeping and budgeting for the family and the individual  
 2. \_\_\_\_\_ Bookkeeping and budgeting for school and social organizations  
 3. \_\_\_\_\_ Bookkeeping for a professional man  
 4. \_\_\_\_\_ Bookkeeping for a farmer  
 5. \_\_\_\_\_ Bookkeeping for a sole proprietor  
 6. \_\_\_\_\_ Bookkeeping for a partnership  
 7. \_\_\_\_\_ Bookkeeping for a corporation  
 8. \_\_\_\_\_ Income Taxes
- VI. Check the method or methods used in teaching bookkeeping within your school system.  

1. _____ Problem-and-Project Method	4. _____ Discussion Method
2. _____ Individual Instruction Method	5. _____ Individual Study Method
3. _____ Teacher-Explanation-Demonstration Method	6. _____ Group-Unit Method
	7. _____ Programed Method
- VII. Place a check by each of the following items that is used in your methods of teaching bookkeeping.  
 1. \_\_\_\_\_ Opaque and overhead projectors  
 2. \_\_\_\_\_ School and community situations to familiarize student with record keeping of social and civic organizations

3. \_\_\_\_\_ Field trips to local businesses
4. \_\_\_\_\_ Visits to the classroom by local businessmen
5. \_\_\_\_\_ Part-time cooperative work experience for students
6. \_\_\_\_\_ Publishers' charts
7. \_\_\_\_\_ Practice sets with business papers. How many? \_\_\_\_\_
8. \_\_\_\_\_ Practice sets without business papers. How many? \_\_\_\_\_
9. \_\_\_\_\_ Other \_\_\_\_\_

VIII. Check the approach or approaches used in teaching bookkeeping

1. \_\_\_\_\_ Single-Entry Approach
2. \_\_\_\_\_ The Journal Approach
3. \_\_\_\_\_ The Account Approach
4. \_\_\_\_\_ Balance Sheet or Equation Approach
5. \_\_\_\_\_ The "Why" Approach
6. \_\_\_\_\_ The "How" Approach

IX. Place a check mark in the blank if your school has the following equipment available. Put two checks if you have used the equipment in your bookkeeping class.

- |                                     |                             |
|-------------------------------------|-----------------------------|
| 1. _____ 16mm film projector        | 6. _____ Proto-Printer      |
| 2. _____ Dry Mounting Press         | 7. _____ Overhead projector |
| 3. _____ Opaque projector           | 8. _____ Mimeograph machine |
| 4. _____ Film Strip projector       | 9. _____ Adding machine     |
| 5. _____ Thermo-Fax Copying Machine | 10. _____ Calculator        |
|                                     | 11. _____ Posting machine   |

X. Check the test or tests used in your bookkeeping class.

- |                              |                           |
|------------------------------|---------------------------|
| 1. _____ Publishers' tests   | 4. _____ Subjective tests |
| 2. _____ Problem tests       | 5. _____ Open-Book tests  |
| 3. _____ Own objective tests |                           |

XI. Which of the following textbooks do you use.

Bookkeeping I

1. \_\_\_\_\_ Carlson, 20th Century Bookkeeping and Accounting
2. \_\_\_\_\_ Freeman, Bookkeeping and Accounting
3. \_\_\_\_\_ Zelliot-Leidner, Introductory Bookkeeping

Bookkeeping II

1. \_\_\_\_\_ Carlson, 20th Century Bookkeeping and Accounting, Advanced
2. \_\_\_\_\_ Freeman, Simplified Bookkeeping and Accounting
3. \_\_\_\_\_ Zelliot-Leidner, Advanced Bookkeeping

\_\_\_\_\_  
Name and Title of Person Replying

SCHOOLS RESPONDING TO QUESTIONNAIRE

Alto	Groesbeck	Poth
Baird	Gruver	Rains
Bastrop	Hale Center	Rankin
Boerne	Hawkins	Round Rock
Bogata	Henrietta	Roscoe
Canutillo	Hitchcock	Rosebud
Cedar Hill	Honey Grove	Sanford-Fritch
Central	Hudson	Schulenburg
Chillicothe	Huntington	Shiner
Copperas Cove	Ingleside	Silverton
Corrigan	Itasca	Spring
Eagle Lake	James Bowie	Springlake
Early	Jefferson	Sudan
East Bernard	Jim Ned	Sunray
East Chambers	Judson	Tarkington
Elkhart	Junction	Warren
Everman	Kennedale	Weimar
Fairfield	London	Westwood
Fannindel	Marble Falls	Whitewright
Ferris	Mart	Woodsboro
Gaston	Medina Valley	Wylie
George West	Millsap	
Glen Rose	Orangefield	
Grapeland	Petersburg	

## **APPENDIX B**

Questionnaire for Businessmen

Name of Firm: \_\_\_\_\_

Location: \_\_\_\_\_

- I. Does your company employ high-school graduates for the bookkeeping department? Yes \_\_\_ No \_\_\_ If yes, how many? \_\_\_
- II. Are your high-school graduates (a) required to make the following entries, and (b) were they adequately prepared to do so when they were employed?
1. (a) \_\_\_ (b) \_\_\_ Adjusting and reversing entries for accrued expenses.
  2. (a) \_\_\_ (b) \_\_\_ Adjusting and reversing entries for accrued income.
  3. (a) \_\_\_ (b) \_\_\_ Adjusting and reversing entries for prepaid expenses.
  4. (a) \_\_\_ (b) \_\_\_ Adjusting and reversing entries for prepaid income.
  5. (a) \_\_\_ (b) \_\_\_ Adjusting entries for valuation accounts.
  6. (a) \_\_\_ (b) \_\_\_ Adjusting entries for merchandise inventory.
  7. (a) \_\_\_ None of these.
- III. Check the items the high-school graduates (a) are required to perform; (b) are adequately trained by their high school courses to perform.
1. (a) \_\_\_ (b) \_\_\_ Make a trial balance
  2. (a) \_\_\_ (b) \_\_\_ Make a work sheet
  3. (a) \_\_\_ (b) \_\_\_ Make a profit and loss statement
  4. (a) \_\_\_ (b) \_\_\_ Make a balance sheet
  5. (a) \_\_\_ (b) \_\_\_ Reconcile a bank statement
  6. (a) \_\_\_ (b) \_\_\_ Handle payroll records
  7. (a) \_\_\_ (b) \_\_\_ Solve miscellaneous problems on their own
- IV. Check the machines that are used satisfactorily by your high-school trained bookkeepers.
1. \_\_\_ Thermo-Fax Copying Machine
  2. \_\_\_ Mimeograph machine
  3. \_\_\_ Adding machine
  4. \_\_\_ Calculator
  5. \_\_\_ Posting machine

V. Chiefly what kinds of work do your high-school trained bookkeepers do?

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VI. Do you have any recommendations for improving the qualifications of the high-school graduate in bookkeeping?  
Yes \_\_\_\_ No \_\_\_\_ If yes, what recommendations?

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## LIST OF BUSINESSES INTERVIEWED AND THEIR LOCATIONS

<u>Business</u>	<u>Location</u>
Smith Chevrolet Company	Henderson, Texas
Cochran Bro. Army Surplus	Henderson, Texas
Henderson Bldg. and Supply	Henderson, Texas
Motor Motel	Henderson, Texas
KOCA Radio Station	Kilgore, Texas
Derrick Bowling	Kilgore, Texas
Sears Roebuck & Company	Longview, Texas
B. F. Goodrich Company	Longview, Texas
Longview Hardward & Furniture Co.	Longview, Texas
R. C. Wood Co., Stationers Printers	Longview, Texas
Lu Ru's Shoe Mart	Longview, Texas
Mize Department Store	Nacogdoches, Texas
Nacogdoches T. V. Cable System	Nacogdoches, Texas
War Surplus Center	Lufkin, Texas
Penny's	Lufkin, Texas
Texas Eastern Gas Transmission Corp.	Baytown, Texas
Lonnie's School of Hair Designs	Baytown, Texas

## VITA

Lloyd T. Dickens was born in Dallas, Texas, on March 5, 1931. At the age of six his family moved to a farm in Polk County. After completing his studies at Big Sandy High School in Polk County in 1949 he entered Sam Houston State Teachers College, Huntsville, Texas. In 1952 he married Jimmie Miriam Henry, a 1952 graduate of Sam Houston. His college studies were interrupted during the Korean conflict, and he served four years in the United States Navy from 1952-1956. He returned to Sam Houston in 1956 and received his Bachelor of Science degree in 1957.

During the following three and one half years he worked as an accountant for Texas Eastern Gas Transmission Corporation located in Baytown, Texas. While working for Texas Eastern he started attending graduate classes at Sam Houston on Wednesday evenings. Since 1960 he has been teaching and coaching in the Huntington Independent School District, Huntington, Texas, and attending Sam Houston during summer vacations. He has two children: Rebecca Jean, 9; Paula Lynn, 7.