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AN EXPERIMENTAL STUDY OF THE
EFFECT OF PRACTICAL EXPERIENCE
ON ACHIEVEMENT IN BOOKKEEPING
AT THE GRAND RAPIDS, MICHIGAN
CENTRAL HIGH SCHOOL

Thesis for the Degree of M. A.
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Allan B. Robinette
1940

THESIS

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CENTRAL HIGH SCHOOL**

by

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CHAPTER I

INTRODUCTION

The problem.

The purpose of this study was to attempt to determine the effect of practical experience in bookkeeping on the scholastic standing and advancement of ninth and tenth grade students in bookkeeping courses. During the years from 1936 to 1940, the writer has been the general treasurer of Central High School, Grand Rapids, Michigan, and has taught many classes in bookkeeping. Much of the work of the treasurer has been given to these classes as a supplementary part of the regular course outlined in the textbook. The present study was undertaken in order to determine the value of this practical experience to bookkeeping pupils. It was desirable to determine the value of such practical experience and similar work for subsequent classes.

The study was conducted in Central High School in Grand Rapids, Michigan, a city of about 160,000 population. The school has an annual student enrollment of approximately 1700 pupils, and is one of six large high schools in the city. It is situated in a completely residential district. Most of the pupils come from the better middle-class families.

Review of literature.

It is generally recognized by many leading authorities in this field that there is a definite need for this type of practical bookkeeping experience in high schools.

These authorities agree that there is much value to the pupils if the school offers student participation in sound and practical financial procedure. McKown (1) states that business is primarily based upon the principle that each party concerned in the handling of funds should check up on every other party, so that all may have mutual guarantees and protections. He maintains that because of this the very best methods of handling money should be instilled into the high school student through practical experience in the handling of money. He further states that this experience becomes of primary importance when we face that fact that many students of bookkeeping in high school will, in future life, go into positions of trust and confidence in which they will be required to handle the funds not only of employers but also of the public.

Jolley (2) has this to say about practical experience in bookkeeping: "The criticism is sometimes made that our

(1) Harry C. McKown, Extra-Curricular Activities, New York: The MacMillan Company, 1929, p 547-549.

(2) L. F. Jolley, "An Accounting System for High School Organizations", The School Review, 31:136-42, Feb., 1923.

commercial courses are not practical. Here is an opportunity to give the bookkeeping pupils an actual set of books on which to work. Almost every pupil who graduates from our high schools will, at some time, be called upon to take care of funds not his own. No matter what work he follows, he will meet this situation, and he will be much better prepared if he has done some of the same kind of work during his high school days. The principles he learns by keeping records of high school funds will perhaps be the most serviceable knowledge which he receives from his accounting course."

In agreement with Jolley and McKown, Fretwell (3) says: "It is the business of the school to organize extra-curricular activities so that they may furnish favorable opportunities for the members of the school to practice with satisfaction the earning, safekeeping, and wise spending of money. All members of the school are of necessity concerned with extra-curricular finances, but the leadership in directing these finances can, and should be, a part of, and grow out of, the department of business education in the school."

However, there seems to be a dearth of experimental evidence available on the effectiveness of practical experience upon the subject. Greenstein (4) conducted an experiment in 1929 using 21 pupils from a bookkeeping class in an unnamed

(3) Elbert K. Fretwell, Extra-Curricular Activities in Secondary Schools, Boston, Houghton-Mifflin Company, 1931, p. 444.

(4) M. B. Greenstein, Three Class Experiments in Business and Bookkeeping Practice, Bulletin of High Points, 12:59-62, September, 1930.

high school located in a city of 75,000 population. He divided this group into three equivalent sections, seven pupils to a section, thus:

Section I -- Had complete charge of the business and bookkeeping affairs of:

- a. The school lunch room,
- b. The school book store, and
- c. Various school plays.

Section II-- Had complete charge of the business and bookkeeping affairs of:

- a. All second semester athletic activities, including basketball, baseball and track, and
- b. All school dances.

Section III-- Worked as apprentices and helpers in various places of business in the city (department stores, offices, theatres, etc.) in the bookkeeping departments of each.

- a. They received neither pay nor remuneration of any sort.
- b. They worked Saturdays and during school vacations, and occasionally after school upon request.

All these activities were extra-curricular and were done under Greenstein's supervision, with the consent of both the pupils and their parents.

At the end of the semester, all pupils took the same examination. Comparisons were made between these three groups of participating students and those in the regular classes. It was found that the experimental groups stood approximately 12 per cent higher than the regular group in the examination.

File (5) conducted a study in the Bowling Green, Ohio, High School in 1933, using 15 pupils chosen from three bookkeeping classes of the second semester. This group took care of, accounted for, and administered funds of several extra-curricular activities. These pupils had volunteered or were selected by the investigator through consultation and the knowledge that they had chosen occupations in the field of bookkeeping and accounting. These students, with direct supervision and aid of the investigator, handled the bookkeeping activities of the following:

1. Athletics,
2. Band and orchestra,
3. Lunch room,
4. Programs,
5. Senior class,
6. Various school clubs (five),
7. Charities such as the American Red Cross and community chest within the school,
8. Annual school reunion,
9. School paper and annual (distribution only), and
10. Miscellaneous activities.

The pupils in this group met for one hour after school on Mondays, Wednesdays, and Fridays of each week that the school was in session. Once a month there was an evening meeting of the group, at which time different bookkeepers, C.P.A.'s, et al, representing business enterprises in the

(5) C. M. File, Through Everyday Record Keeping into Bookkeeping and Accounting, National Business Education, 3:20-25, December, 1934.

city talked to the group informally, told their experiences and cited the practical applications of bookkeeping in the business world.

Throughout the school year a continuous check was made of class recitations and examination scores. It was found that the group which did the extra-curricular work compared with the regular classes as follows: class-recitation, 15 per cent higher; class discussions, 35 per cent higher; final examination, 7 per cent higher; and final marks, 11 per cent higher.

One year later, in 1934, a similar study was conducted in the Salina, Kansas, High School by Sheeles (6). Twenty-nine pupils enrolled in bookkeeping during the second semester were used in the study. The class was divided, as closely as possible, to resemble a large bookkeeping department of either a corporation or a big-city department store. Meeting five days a week for one hour each day, the students took care of the following accounts for the school:

1. The school paper and annual,
2. School athletics,
3. School book store, and
4. School library.

Money collected from these sources was brought to the "department" and allotted to various groups for counting and banking. At the end of the semester, definite conclusions were drawn from final examination scores, final grades, and

(6) A. G. Sheeles, School Was Never Like This!, Business Education World, 19:799-802, June, 1938.

like sources, and it was found that the students used in the study ranked 51 per cent higher than those in the regular bookkeeping classes. Furthermore, in oral class questions and recitations demanding practical thought and experience, the individuals of the participating group ranked 60 per cent higher than the regular class members.

In the last three references cited, no mention was made by the investigators of the equivalence of the experimental and control groups. Although the results of the experiment seemed to show that practical experience in bookkeeping was of distinct value to the pupils included in these studies, there was no mention made of the equivalency of the groups considered.

A comparison of the conclusions of all three of these studies cited, reveals that all of them show a definitely higher standing in bookkeeping for the participating group than for the non-participating group. This increase in standing ranges from seven per cent (File's study) to 60 per cent (Sheeles' study). On final scores based on various measures of achievement, this increase in standing ranges from six per cent (Sheeles' study) to 12 per cent (Greenstein's study).

The review of literature shows, and authorities agree, that the handling of school funds should be a part of the regular bookkeeping class work. Experiments seem to indicate that this type of work is of distinct value and benefit to the students, and therefore should be a part of the bookkeeping courses.

CHAPTER II

PROCEDURE

Nature of the practical experience.

During the second semester of the school year 1939-1940, the writer taught two classes in beginning bookkeeping. The class which met in the afternoon was given the regular work of the text, and the other class which met in the morning was given this same regular work and, in addition, much practical experience related to keeping the accounts of school activities.

The experience was not confined to the class period, but many of the pupils availed themselves of the opportunity to carry out the operations during vacant hours and at the close of the school day. The practical experience itself consisted of counting money, filing records, recording transactions, and completely preparing for banking all of the money turned in by various school organizations such as, the athletic association, school store, publications, general office, band, clubs, and departments.

The work given to the participating group was made up of the various activities of the treasurer and included the following:

First. The receipts of the treasurer were written and given to the organization which deposited the money. Receipts

were in numerical order and were filed according to number.

Second. The deposit tickets were completed and the money prepared for banking.

Third. The record of cash receipts was kept by certain of the pupils, and the distribution of the credits to the several organizations completed. In this case, the entire group was informed of the work carried on by a few.

Fourth. The orders on the treasurer, properly signed by the organization treasurer, sponsor, and principal, and the payment of these orders by check was part of the procedure of the participating class. Checks were written on the check protector and many of these checks were mailed, with suitable forms properly completed, to inform the firm receiving the check of the source and purpose of the check. After payment, orders were filed by check number with the invoice or the receipt attached. When the cancelled checks were received, they were attached to the order and invoice and became a permanent record for the school.

Fifth. The record of cash disbursements was kept by certain pupils, and a proper distribution of the debits made to the organizations. In this instance again, all of the pupils in the participating group were made familiar with the activities carried on by a few.

Sixth. At the close of each month, every member of the participating group made out a reconciliation of the bank statement.

Seventh. The disbursements of the month were totaled, and debited to the appropriate organizations, and a statement was given to each organization showing its credit balance at the close of the month.

Eighth. At the end of each month a trial balance was prepared by some members of the participating group. One copy was given to the principal of the school, one was filed with the permanent records of the school, and one was kept by the treasurer for his record.

Of necessity, a great deal of the work described in the foregoing paragraphs was done by the treasurer himself, and that in which the pupils participated was always done under his direct supervision. All money was taken to the bank by the treasurer, as the rules under which he worked did not permit pupils to go upon such errands. However, when opportunities appeared, members of the participating group made the trip to the bank with him. These opportunities came often, as 103 trips were made to the bank during the year.

All members of the participating group, according to their own statements, contemplated continuing in the commercial courses of Central High School.

Equivalence of the two groups.

The participating group consisted of a class of 43 pupils. The non-participating class was composed of 37 pupils. The personnel of the two classes was determined by the membership assigned at the beginning of the semester.

From each of these classes it was possible to choose 20 pupils who had approximately the same I.Q.'s and scholastic averages. The I.Q. was the one determined for each student by the Special Education Department of the Grand Rapids Board of Education. This result was based upon the Otis Quick-Scoring Intelligence Test. These tests were given in the fall of 1939. The scholastic average for each pupil was determined at the close of the first semester of the school year 1939-1940. Each pupil in the participating group was paired with a pupil in the non-participating group having an approximately equal I.Q. and scholastic average. The students were not matched in age. The mean age of the non-participating group was 16 years and 11 months, with a standard deviation of 11.7 months. The mean age of the participating group was 15 years and 1 month, with a standard deviation of 15.8 months.

Table I shows the manner in which the pupils of the two groups were matched with regard to I.Q. and scholastic average. The mean I.Q. of the participating group was .6 points higher than that of the non-participating group. The means of the scholastic averages show a difference of .44 per cent in favor of the non-participating group. Although the standard deviations are high because of the small numbers involved, there is little difference between the two.

The standard error of the mean I.Q. of the non-participating group was ± 1.909 and of the participating group ± 1.840 , showing a difference of only .069. The standard

TABLE I

THE EQUIVALENCE OF THE TWO GROUPS BASED UPON I.Q. AND SCHOLASTIC AVERAGES

NON-PARTICIPATING GROUP			PARTICIPATING GROUP		
PUPIL	I.Q.	SCHOLASTIC AVERAGE	PUPIL	I.Q.	SCHOLASTIC AVERAGE
A	92	79.09	Aa	91	78.18
B	103	87.03	Bb	103	84.16
C	122	92.69	Cc	120	87.45
D	100	75.60	Dd	98	77.00
E	94	76.82	Ee	94	73.54
F	81	74.80	Ff	87	79.50
G	89	78.08	Gg	87	72.17
H	109	75.66	Hh	109	79.25
I	95	78.73	Ii	101	82.12
J	96	84.00	Jj	96	83.62
K	106	78.30	Kk	110	79.80
L	103	93.25	Ll	106	86.83
M	92	82.75	Mm	94	83.75
N	97	80.89	Nn	98	82.00
O	97	78.80	Oo	100	79.16
P	98	80.88	Pp	96	83.64
Q	94	78.11	Qq	92	74.39
R	94	79.84	Rr	93	77.00
S	95	88.12	Ss	95	85.12
T	110	87.87	Tt	109	84.87
MEAN	98.35	81.12		98.95	80.68
Stand- ard Deviation	8.514	5.160		8.231	4.232

error of the difference of these means was ± 2.651 . Since the difference between the means was .928, which was much less than the standard error of the difference of the means, the groups appear to have equivalent intelligence quotients.

The standard error of the mean scholastic average of the non-participating group was ± 1.154 , and of the participating group $\pm .946$, showing a difference of only .208. The standard error of the difference of the means was ± 1.490 . Therefore, there appears to be no real difference in the mean scholastic averages of the two groups.

It is believed that the two groups were equivalent for purposes of this experiment in regard to I.Q. and scholastic averages. The ages of the members of the two groups are not considered in this study. Considering Table I, it would seem that the two groups are rather closely matched as to items considered and discussed in the study.

Tests used.

In attempting to measure the advantages which the participating group received through these procedures, and in order to put this measurement into some tangible form, several tests were given in the regular class period to both groups. Seven of these tests were selected for use in this study. They were chosen because they appear to measure the degree of success attained in both the regular work as outlined in the text and the practical procedure as carried out by the participating group.

The tests used included two printed tests by Elwell (8), the author of the textbook used in the bookkeeping classes of Central High School. These tests covered some of the material as outlined in the bookkeeping text. For purposes of clarity, they were numbered Tests I and II in this study. A trial balance was given to both groups, and from it the pupils were required to prepare a working sheet, profit and loss statement and balance sheet. This exercise was designated Test III.

Tests I, II, and III dealt with the material covered in the regular class work. These results of the tests are considered together.

The other tests were constructed by the writer. These tests dealt with the regular bookkeeping class work in addition to the activities of the school treasurer. All items in the tests were considered in the regular class routine. These tests were designated as Tests IV, V, and VI in the experiment.

A reconciliation of a bank statement was called for in the last test. This activity was a part of the regular class work, but was emphasized by the participating group. This will be referred to as Test VII.

Tests IV, V, and VI were considered together and Test VII was considered alone. All four of these tests emphasized practical bookkeeping work.

(8) Fayette K. Elwell, Bookkeeping for Today, Chicago, Illinois: Ginn and Company, 1932.

Test I was given to both classes at the middle of the semester. The other six were given during the last three weeks of the semester.

Limitations.

This study deals with only two groups chosen from two second semester classes in Bookkeeping I. It was carried on for one semester only. More significant results could be obtained from much larger groups studied during several semesters.

CHAPTER III

INTERPRETATION OF RESULTS

The individual test scores on the first three tests given to the two groups of bookkeeping pupils are recorded in Tables II and III. The standard deviation of all scores in Test I is ± 7.328 ; in Test II, ± 7.875 ; and in Test III, ± 1.688 . The scores on Tests I and II had approximately five times the variability of Test III. Columns four and nine gives the weighted scores on Test III, where each score of Test III was multiplied by five in order to give more nearly equal weight to the scores of each test. The composite scores are given in columns five and ten. The differences between the composite scores of corresponding individuals in the two groups are indicated in column eleven.

The mean composite score of the non-participating group was 158.8. The standard deviation was ± 17.262 , with a standard error of the mean of ± 3.851 .

The mean composite score of the participating group was 167.55. The standard deviation was ± 15.123 , with a standard error of the mean of ± 3.381 .

The comparison of the totals of Table II, together with means and standard deviations of the scores of the 40 individuals is shown in Table III.

TABLE II.

SCORES MADE BY THE INDIVIDUALS OF BOTH GROUPS ON TESTS I, II AND III IN SECOND SEMESTER BOOKKEEPING CLASSES.

NON-PARTICIPATING GROUP						PARTICIPATING GROUP						DIFFERENCE OF CORRESPONDING INDIVIDUAL SCORES OF THE 2 GROUPS
PU-PIL	TEST I	TEST II	TEST III	TEST III WEIGHTED	COMPOSITE SCORE	PU-PIL	TEST I	TEST II	TEST III	TEST III WEIGHTED	COMPOSITE SCORE	
A	67	58	8	40	165	Aa	73	50	7	35	158	- 7
B	60	65	9	45	170	Bb	52	71	9	45	168	- 2
C	68	75	10	50	193	Cc	65	71	10	50	186	- 7
D	58	68	8	40	166	Dd	55	62	9	45	162	- 4
E	63	58	5	25	146	Ee	62	75	8	40	177	+31
F	56	58	5	25	139	Ff	67	54	8	40	161	+22
G	62	54	8	40	156	Gg	52	58	9	45	155	- 1
H	69	70	8	40	179	Hh	61	71	6	30	162	-17
I	66	63	8	40	169	Ii	56	50	7	35	141	-28
J	62	64	8	40	166	Jj	63	61	8	40	164	- 2
K	64	66	6	30	160	Kk	70	66	10	50	186	+26
L	62	75	8	40	177	Ll	73	70	10	50	193	+16
M	50	54	7	35	139	Mm	65	58	9	45	168	+29
N	54	50	9	45	149	Nn	55	62	8	40	157	+ 8
O	50	46	10	50	146	Oo	61	58	4	20	139	- 7
P	45	46	6	30	121	Pp	60	71	9	45	176	+55
Q	42	58	7	35	135	Qq	57	62	9	45	164	+29
R	66	66	7	35	167	Rr	59	61	7	35	155	-12
S	52	52	9	45	149	Ss	69	66	10	50	185	+36
T	71	63	10	50	184	Tt	69	75	10	50	194	+10
Total	1187	1209	156	780	3176	Total	1244	1272	167	835	3351	+175

TABLE III

TOTAL SCORES MADE BY BOTH NON-PARTICIPATING AND PARTICIPATING GROUPS ON TESTS I, II, AND III IN SECOND SEMESTER BOOKKEEPING I CLASSES

	NON-PARTICIPATING GROUP	PARTICIPATING GROUP	TOTAL (BOTH GROUPS)
TEST I			
Total Score ..	1187	1244	2431
Mean Score ...	59.35	62.20	60.72
Standard Deviation ...	8.02	6.41	7.33
TEST II			
Total Score ..	1209	1272	2481
Mean Score ...	60.45	63.60	62.00
Standard Deviation ...	8.33	7.40	7.88
TEST III			
Total Score ..	156	167	323
Mean Score ...	7.80	8.35	8.08
Standard Deviation ...	1.08	1.50	1.69
Total Weighted Score	780	835	1615
Mean Weighted Score.....	39.00	41.75	40.38
COMPOSITE SCORE	3176	3351	6527
MEAN COMPOSITE SCORE.....	158.80	167.55	

The mean composite score of the participating group is 8.75 points higher than the mean composite score of the non-participating group.

The standard error of this difference is ± 4.032 . The difference between the means is only 2.17 times the standard error of the difference of the means.

Results of Tests I, II, and III show that there is little significant difference in the achievement of the two groups, although the participating group in mean and total score did exceed the corresponding scores of the non-participating group.

Column 12, Table II, indicates that ten members of the non-participating group received a higher composite score than the individuals of the other group with whom they were paired. In view of this result, the difference between the means seems of less significance.

The scores made by the individuals of both groups in Tests IV, V, and VI are tabulated in Table IV. The standard deviation of all scores in Test IV is 11.302; in Test V, 12.784; and in Test VI, 8.423. The scores on Tests IV and V had approximately one and one-half times the variability of Test VI. Columns four and nine show the weighted scores on Test VI, where each score on this test is multiplied by 1.5 in order to give more nearly equal weight to the scores of each test. The composite scores are given in columns five and ten. The differences between the composite

TABLE IV.

SCORES MADE BY THE INDIVIDUALS OF BOTH GROUPS ON TESTS IV, V AND VI IN SECOND SEMESTER BOOKKEEPING CLASSES.

NON-PARTICIPATING GROUP						PARTICIPATING GROUP						DIFFERENCE OF CORRESPONDING INDIVIDUAL SCORES OF THE 2 GROUPS
PUPIL	TEST IV	TEST V	TEST VI	TEST VI WEIGHTED	COMPOSITE SCORE	PUPIL	TEST IV	TEST V	TEST VI	TEST VI WEIGHTED	COMPOSITE SCORE	
A	60	74	90	135	269	Aa	68	75	95	142	285	+ 16
B	72	74	92	138	284	Bb	78	70	90	135	283	- 1
C	84	82	100	150	316	Cc	90	85	100	150	325	+ 9
D	80	70	94	141	291	Dd	80	70	94	141	291	0
E	60	60	82	123	243	Ee	90	80	96	144	314	+ 71
F	62	56	82	123	241	Ff	95	85	100	150	330	+ 89
G	68	64	84	126	258	Gg	60	72	94	141	273	+ 15
H	84	80	90	135	299	Hh	60	60	86	129	249	- 50
I	80	60	92	138	278	Ii	90	70	100	150	310	+ 32
J	76	64	88	132	272	Jj	90	90	100	150	330	+ 58
K	70	66	80	120	256	Kk	90	90	90	135	315	+ 59
L	76	80	94	141	297	Ll	90	90	100	150	330	+ 33
M	64	60	82	123	247	Mm	85	70	90	135	290	+ 43
N	62	70	80	120	252	Nn	90	60	90	135	285	+ 33
O	48	60	70	105	213	Oo	90	60	92	138	288	+ 75
P	70	70	80	120	260	Pp	80	80	80	120	280	+ 20
Q	74	50	80	120	244	Qq	80	60	94	141	281	+ 37
R	80	74	100	150	304	Rr	82	70	94	141	293	- 11
S	70	80	88	132	282	Ss	90	90	100	150	330	+ 48
T	78	90	96	144	312	Tt	70	70	95	142	282	- 30
Total	1418	1384	1744	2616	5418	Total	1648	1497	1880	2819	5964	546

scores of corresponding individuals in the two groups are indicated in column eleven, Table IV.

The mean of the composite scores of the non-participating group in Tests IV, V, and VI is 270.9. The standard deviation is 26.65, with a standard error of the mean of ± 5.937 .

The mean of the composite scores of the participating group in these same three tests is 298.2. The standard deviation is 22.589, with a standard error of the mean of ± 7.796 .

The comparison of the totals of Table IV, together with the means and standard deviations of the scores of the 40 individuals is shown in Table V.

The mean composite score of the participating group is 27.3 points higher than that of the non-participating group. The standard error of the difference between the means is ± 7.796 . Since the difference between the means is 3.5 times its standard error, this difference is judged to be significant. This finding is for the groups as units and not necessarily for individuals.

Individual composite scores show that 15 pupils in the participating group received higher scores than the corresponding members of the non-participating group. One member received the same score. In only four cases did an individual in the non-participating group receive a higher score than the corresponding individual in the participating group.

TABLE V

TOTAL SCORES MADE BY BOTH NON-PARTICIPATING AND PARTICIPATING GROUPS ON TESTS IV, V, AND VI IN SECOND SEMESTER BOOKKEEPING I CLASSES

	NON-PARTICIPATING GROUP	PARTICIPATING GROUP	TOTAL (BOTH GROUPS)
Test IV			
Total Score ..	1418	1648	3066
Mean Score ...	70.9	82.4	76.65
Standard Deviation ...	10.72	10.31	11.30
TEST V			
Total Score ..	1384	1497	2881
Mean Score ...	69.2	74.85	71.92
Standard Deviation ...	9.95	10.5	10.28
TEST VI			
Total Score ..	1744	1880	3624
Mean Score ...	87.2	89.5	88.35
Standard Deviation ...	7.60	5.24	8.42
Total Weighted Score	2616	2819	5435
Mean Weighted Score.....	130.8	140.95	135.9
COMPOSITE SCORE	5418	5964	11382

Test VII was definitely of the "right or wrong" type, since if any part was wrong the entire test was scored incorrect. Sixteen members of the participating group and eight members of the non-participating group completed this test correctly. Seven corresponding members of each group scored correct results. Nine other members of the participating group answered the test correctly, while the corresponding members of the non-participating group did not. Only one member of the non-participating group answered correctly, while the corresponding member of the participating group answered incorrectly.

When questioned as to the value of the practical experience, all members of the participating group indicated that the work was interesting, profitable, and enjoyable to them. No one reported any disadvantages from the experience.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND SUGGESTIONS FOR FURTHER STUDY

SUMMARY

The experiment was conducted to determine the effect of practical procedure upon achievement in the bookkeeping course. Two equated groups of 20 pupils each were used in this experiment. The results follow:

1. A statistical analysis of Table I, reveals that the two groups were equivalent on the basis of I.Q. and scholastic averages.

2. There was no significant difference between the scores of the two groups in Tests I, II, and III. These tests dealt with material as outlined in the regular bookkeeping courses.

3. The individual composite scores on Tests I, II and III, show that ten members of the participating group received higher scores than the corresponding members of the non-participating group.

4. There was a significant difference between the composite scores of the two groups on Tests IV, V and VI. The participating group received significantly higher scores than did the non-participating group. These tests emphasized practical bookkeeping work.

5. Individually, 15 members of the participating group received higher composite scores on these last three tests

than did the corresponding members of the non-participating group.

6. In Test VII, 16 members of the participating group completed the reconciliation of bank statement correctly. Only eight members of the non-participating group completed this test correctly.

7. All the pupils who took part in the practical book-keeping activity expressed satisfaction in it and reported that they had received profit from it.

Conclusions.

Since the practical work assigned is a regular part of office practice, since the experience received enabled the participating group to complete the last four tests with greater accuracy, and since this added work did not interfere with the mastery of subject matter as measured by the scores on the first three tests, therefore it may be concluded that this practical procedure was advantageous to bookkeeping pupils, and should be continued as a regular part of the bookkeeping courses in Central High School.

Some of the benefit which was apparently derived by the participating group may not have come from the activities but may be attributed to the added time spent by this group in performing the exercises.

Suggestions for further study.

A similar study might be continued in Central High School through the next several semesters of bookkeeping,

with the possible formation of an advanced class enrolled to carry out the work of the treasurer as a class project. The study just concluded, covered only one semester, and did not involve a sufficient number of pupils or a long enough period of time for conclusions drawn to be judged as final. Therefore, it is suggested that a similar experiment be continued for several semesters to supplement the results of this study. Also, it would be interesting to conduct a cooperative study involving the high school shorthand and typewriting classes and the bookkeeping classes in order to measure the value of actual business experience in writing letters, in filing and general office practice, to pupils in all of these classes.

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REFERENCES CITED

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APPENDICES -- APPENDIX A

CASH RECEIPTS

[illegible]

CASH RECEIPTS

Date	Received From	Receipt No.	Amount	Athletic Assn.		School Store		General Fund	Helios	Locker	Senior Class	Band and Orchestra	Music Dept.
				Acct.	Amount	Acct.	Amount						
			356962		61041		46523	25362	43122	9440	44755	10779	12533
May 17	Lorraine Drury.	1810	2-										2-
17	C. H. Newcomer.	1811	10069			701	10069						
20	Pearl E. Oldt.	1812	5-519	5-									
20	Pearl E. Oldt.	1813	3850	317	2350								
				315	15-								
20	Martin Decker.	1814	2921	111	2921								
20	Pearl E. Oldt.	1815	8-	310	8-								
22	David Idema.	1817	20-						20-				
22	David Idema.	1818	16152						16152				
22	Central High Office	1819	1450					1450					
22	C. H. Newcomer.	1820	3150			702	3150						
22	Paul Joudo.	1821	08										
22	Allan M. Curdy	1822	465										
23	David Idema	1823	8460						8460				
23	Floyd Barber	1824	524								524		
23	C. H. Newcomer.	1825	25-			702	25-						
27	David Walr.	1826	665										
29	David Idema.	1827	5081						5081				
29	C. H. Newcomer.	1828	79-			702	79						
	Total Receipts		423657		69112		70142	26812	74815	9440	45279	10779	12733
	Total Disbursements		87549		39222		87-	3618	1027	5-	13302	4050	2437
June 1	Balance		336108		29890		61442	23194	73788	8940	31977	6729	10296
3	Allice Epps	1829	25										
3	Pearl E. Oldt.	1830	168519	168									
3	David Idema	1831	13005						13005				
3	C. H. Newcomer.	1832	1950			702	1950						
3	Pearl E. Oldt.	1833	759519	725									
				111	34								
3	Martin Decker.	1834	1424	111	1424								
3	David Idema.	1835	23418						23418				
3	Harold Wheeler.	1836	252										
4	Floyd Barber.	1837	322										
4	Betty De Haan.	1838	1024								322		
4	David Idema	1839	12630						12630				
4	Pearl E. Oldt.	1840	5-519	5-									
			391585		32741		63392	23194	122841	8940	32299	6729	10296

Page 59.

37a

CASH RECEIPTS

[illegible]

CASH DISBURSMENTS

[illegible]

CASH DISBURSEMENTS

Date	Drawn To	Check No.	Amount	Athletic Assn.		School Store		General Fund	Helios	Locker	Senior Class	Band and Orchestra	Music Dept.
				Acct.	Amount	Acct.	Amount						
			613-		21236		79-	3618	1027	5-	13302	20-	2157
May 23	Philbrick Hdw. Co.	2509	390	451	390								
23	Land L Tobacco & Candy Co.	2510	966	155	966								
24	Donald Bender.	2511	4-			751	4-						
24	Eleanor Meyers.	2512	4-			751	4-						
24	Louis B. Malecki.	2513	280										280
24	National Ath. Scholarships	2514	1150	110	1150								
27	David Walr.	2515	10-										
27	Herkner Jewelry Co.	2516	721										
28	Carl Snyder.	2517	250	431	250								
28	Louis B. Malecki.	2518	2050									2050	
28	H. R. Terryberry Co.	2519	1082										
28	J. D. Haskie M.D.	2520	50-	353	50-								
28	Cascade Church of Christ.	2521	70-	110	70-								
28	Board of Education	2522	230	337	230								
28	Ralph H. Conger.	2523	10-	539	10-								
28	Martin Decker.	2524	20-	510	10-								
				539	10-								
29	Central Helios	2525	10-										
29	Mrs. Gertrude Pangborn	2526	180										
29	Heber Enright.	2527	195										
29	Richard Ward	2528	2-										
29	Elizabeth Blacklock.	2529	5-										
29	Crusstock Pub. Co.	2530	255										
	Total Disbursements		87549	39222		87-	3618	1027	5-	13302	4050	2437	
June 3	Vicki Frocks	2531	699										
4	Board of Education	2532	6554					6554					
4	Board of Education	2533	5590					5590					
4	Board of Education	2534	2360					2360					
4	Board of Education	2535	7688					7688					
4	Henry Smith Floral	2536	309										
4	Dow Bender.	2537	60										
4	Russell Waters.	2538	1-	340	1-								
5	Henry B. Davis	2539	5-										
6	Prussers Jewelers.	2540	255										
			24115	1-				22192					

CASH DISBURSMENTS

Page 78

Agona	Biology	C Club	Classical	Con- serva-tion	Domecon	English Dept.	G.A.A.	History Dept.	Hi-Y	Junior Class	Nat'l Honor Society	Sock and Buskin	Current Events	Miscellaneous Account	Amt.
258					240			2162			10 -	5 -			54 -
									721					Le Circle Francis	10 -
1082															
								180 195 2 -						Pen ^{ny} & Pencil	10 -
														Math Club	5 -
1340	-	-	-	255 255	240	-	575	2162	721	-	10 -	5 -	-		79 -
														Ellen Dean Fund	699
												309 60			
			5 -												
			5 -				255 255					369			699

CASH DISBURSEMENTS

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Bookkeeping Tests · · Test I

CHAPTERS I-VII

TO ACCOMPANY *BOOKKEEPING FOR TODAY*

By

FAYETTE H. ELWELL

GINN AND COMPANY

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SCORE		
The score for a perfect test on Test Number I is 78. The score for each of the tests is the sum of the answers which are right.		
TEST	NUMBER OF QUESTIONS	SCORE (Number Right)
True-False	25	
Matching	15	
Completion	20	
Multiple-Choice	18	
Total	78	

Time _____ Date _____

School _____ Year in Course _____

B1

eti

MATCHING TEST

The solution of this test consists in identifying the statements in Column II with the corresponding terms in Column I. Read both columns carefully; then, in the blank spaces in Column II, place the numbers of the terms in Column I which you think most nearly correspond to the statements opposite the blanks.

True	False	COLUMN I	COLUMN II
		1. Posting	[---] Statement of the financial condition of a business at a given time.
		2. Merchandise inventory	[---] Assets minus liabilities equal proprietary interest.
		3. Proprietor	[---] The book of final entry.
		4. Assets	[---] Values parted with by a business.
		5. Gross profit	[---] Record of a transaction in the journal.
		6. Journalizing	[---] List of open accounts after the ledger has been closed.
		7. Ledger	[---] Transferring debits and credits to their ledger accounts.
		8. Debits	[---] Amounts owed by a business.
		9. Entry	[---] Excess of sale price of merchandise over cost price.
		10. Balance sheet	[---] An itemized list of the quantity and value of all unsold merchandise.
		11. Trial balance of balances	[---] A person who bears the risks of a business.
		12. Operating expenses	[---] The analysis of a business transaction into its debit and credit elements.
		13. Liabilities	[---] Property of value owned by a business.
		14. Debtor	[---] A list of the names and balances of the open ledger accounts.
		15. Profit and loss statement	[---] A statement showing the gross profit or loss, the operating expenses, and the net profit or loss for a period.
		16. Balance-sheet equation	
		17. Creditor	
		18. Post-closing trial balance	
		19. Credits	
		20. Net profit	
		Total Score	[---]

COMPLETION TEST

A series of incomplete statements is given below. In each blank space write the word or term which makes the statement complete and true in meaning.

- One form of the balance-sheet equation is: Assets = Liabilities +
- The analysis of a transaction into its debit and credit elements is called
- Values parted with by a business are to the appropriate accounts.
- A list of open ledger accounts is called a
- Amounts owed by a business are called
- If assets exceed liabilities, the difference is
- Cash paid for the use of a building is debited to
- The journal is a book of entry.
- In closing the ledger, the balance of the *Mdse. Purchases* account is transferred to the account.
- Like values arising in different transactions are summarized in the
- The formal statement of assets, liabilities, and proprietary interest is called a
- The excess of the gross profit over the total of the operating expenses is called
- Values received are to the appropriate accounts.
- A double-line ruling in an account implies that the account is in
- When F. J. Taylor receives cash from John Brown in full of account, his bookkeeper should debit *Cash* and credit
- If on closing the books the *Profit and Loss* account shows a credit balance, the result is a net
- A single line across the amount column in a ledger account indicates transfer or
- The process of transferring balances from one account to another at the end of a fiscal period is called the ledger.
- The *Salary* account is closed into
- The is the book of final entry.

Total Score

Score

Test IJ

MULTIPLE-CHOICE TEST

A series of statements is given below, each followed by five possible answers. Draw a line under the one of the five which seems to you most nearly correct; in each case underline only one answer.

1. If B. A. Smith received \$75 from Bond & Co. to apply on account, his bookkeeper should debit:
(1) *B. A. Smith* (2) *Bond & Co.* (3) *Mdse. Sales* (4) *Salary* (5) *Cash*.
2. In closing the books of a business the gross profit for a period is transferred as: (1) a credit to *Mdse. Purchases* (2) a debit to *Mdse. Inventory* (3) a credit to *Profit and Loss* (4) a credit to the *Proprietor's account* (5) a debit to *Profit and Loss*.
3. The determining of the debit and credit elements in a business transaction is called: (1) posting (2) sale on account (3) closing the ledger (4) investment (5) journalizing.
4. The credits to the *Mdse. Sales* account are composed of: (1) net profit plus operating expenses (2) gross profit plus cost of goods sold (3) merchandise inventory plus net profit (4) gross profit minus operating expenses (5) net loss plus gross profit.
5. A purchase of merchandise on account from A. L. Allen should be credited by the purchaser to:
(1) *Mdse. Purchases* (2) *Mdse. Inventory* (3) *A. L. Allen* (4) *Profit and Loss* (5) *Office Equipment*.
6. If L. A. Martin paid \$50 to Davis & Co. on account, his bookkeeper should debit: (1) *Davis & Co.* (2) *Cash* (3) *L. A. Martin* (4) *Mdse. Purchases* (5) *Mdse. Sales*.
7. The debits in the *Cash* account of a business show: (1) cash received from any source (2) cash received on account only (3) cash on hand only (4) cash investment in the business (5) value of services received.
8. An entry debiting *Mdse. Purchases* and crediting *M. C. Hall* indicates: (1) a purchase for cash (2) a payment on account (3) a purchase on account (4) a payment in full of account (5) a gross profit.
9. The *Salary* account is credited: (1) for the gross profit of the business (2) for the amount of *Salary* transferred to *Profit and Loss* as an operating expense (3) for cash paid for services of an employee (4) for cash paid for services of the proprietor (5) for the net profit of the business.
10. In the journal of R. K. Blake is an entry debiting *Cash* and crediting *T. M. Hunter*. This entry shows that: (1) R. K. Blake bought office equipment of T. M. Hunter (2) T. M. Hunter invested cash in the business (3) T. M. Hunter received cash for services (4) R. K. Blake received cash from T. M. Hunter to apply on account (5) T. M. Hunter paid cash to R. K. Blake for use of store.
11. The selling price of merchandise sold was \$150 less than the cost. The net loss is: (1) \$150 minus the operating expenses (2) \$150 (3) \$150 plus the operating expenses (4) \$150 plus the proprietor's investment (5) total of the operating expenses.
12. The operating expenses of A. L. Dolan were \$85 more than the gross profit. The difference represents: (1) gross loss (2) proprietary interest (3) amount paid for services (4) net loss (5) net profit.
13. In the account form of balance sheet: (1) assets minus liabilities equal proprietary interest (2) assets equal liabilities plus proprietary interest (3) assets plus liabilities equal proprietary interest (4) assets minus net loss equal proprietary interest (5) assets equal liabilities plus net profit.

Score

Test IJ

MULTIPLE-CHOICE TEST (CONTINUED)

14. Cost of sales may be obtained by: (1) subtracting the inventory from total sales (2) adding the total expenses to purchases (3) subtracting the inventory from total purchases (4) determining the total cash paid out (5) adding operating expenses to the inventory.
15. If the proprietary interest at the end of a period is greater than the proprietary interest at the beginning it indicates: (1) a gross loss for the period (2) a gross profit on sales (3) a net profit for the period (4) an increase in cost of goods sold (5) a decrease in merchandise sales.
16. The merchandise on hand at the end of the period is recorded in the: (1) *Mdse. Sales* account (2) *Mdse. Inventory* account (3) *Proprietor's account* (4) *Salary* account (5) *Profit and Loss* account.
17. The net profit of a business for the month is \$250. It should appear on the ledger in the account with: (1) *Mdse. Sales* (2) *Mdse. Inventory* (3) *Profit and Loss* (4) *Salary* (5) *Cash*.
18. If John Doe's assets at the end of a month are \$6400, and his liabilities are \$2700, the difference, \$3700, is: (1) net profit (2) net loss (3) gross profit (4) operating expense (5) net worth.

Total Score

Bookkeeping Tests · · Test II

CHAPTERS VIII-XVI

TO ACCOMPANY *BOOKKEEPING FOR TODAY*

By

FAYETTE H. ELWELL

GINN AND COMPANY

BOSTON · NEW YORK · CHICAGO · LONDON · ATLANTA · DALLAS · COLUMBUS · SAN FRANCISCO

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SCORE		
The score for a perfect test on Test Number II is 83. The score for each of the tests is the sum of the answers which are right.		
TEST	NUMBER OF QUESTIONS	SCORE (Number Right)
True-False	30	
Matching	15	
Completion	20	
Multiple-Choice	18	
Total	83	

Name _____ Date _____

School _____ Year in Course _____

Test II]

TRUE-FALSE TEST

A series of statements is given below, some true and some false. If you think the statement is true, place a check mark (✓) in the column headed **True**; if you think it is false, place a check mark in the column headed **False**. Classify only those statements about which you feel sure.

1. *Fuel on Hand* is an asset account.
2. Expense accounts record amounts spent with the object of earning a profit.
3. The net profit of a business is debited to the *Proprietor's Drawing* account.
4. Fuel consumed during a month should appear on the books of a business as an asset.
5. When office supplies are purchased, the cost is debited to the *Office Supplies Expense* account.
6. Merchandise withdrawn by the proprietor of a business is credited to the *Proprietor's Investment* account.
7. A classification of accounts for any business is a list of the accounts used in that business, grouped according to the main divisions to which they belong.
8. A proprietary interest account is debited for an increase.
9. An increase in cash is credited to the *Cash* account.
10. If the footing of the Expense and Cost of Sales column in the working sheet exceeds the footing of the Income column, a net loss occurs.
11. The *Proprietor's Investment* account is debited with the original investment made in the business.
12. A 60-day note dated March 25 is due May 25.
13. Real accounts are those which appear in a profit and loss statement.
14. A credit to an accounts payable account represents a decrease in liabilities.
15. Expense accounts always show credit balances.
16. A credit to the *Mdse. Sales* account represents an increase in income.
17. A promissory note is a written promise to pay a specified sum of money at a given future date.
18. *Profit and Loss* is an income account.
19. A working sheet contains only the trial balance and the profit and loss statement data.
20. *Store Equipment* is an expense account.
21. The trial balance will not balance if the balance of an open account has been omitted.
22. *Interest Income* is debited for payments for interest received from others.
23. The total of the cash-receipts side of the cash journal is debited to *Cash*.
24. A compound entry includes more than one debit or credit item.
25. The total of the sales journal is credited to *Mdse. Purchases*.
26. A debit balance in the *Proprietor's Drawing* account shows that the proprietor has withdrawn more than the net profit.
27. Nominal accounts are those which record the sources and amounts of income and the purposes and amounts of expenses.
28. An error of transplacement in posting does not affect the trial balance.
29. In the working sheet, both the adjusting and the closing entries are entered in the Adjustments columns.
30. The person to whom payment of a note is to be made is called the payee.

[illegible]**Total Score**

Test II]

MATCHING TEST

The solution of this test consists in identifying the statements in Column II with the corresponding terms in Column I. Read both columns carefully; then, in the blank spaces in Column II, place the numbers of the terms in Column I which you think most nearly correspond to the statements opposite the blanks.

True	False	COLUMN I	COLUMN II
		1. <i>Fuel on Hand</i>	[---] An account recording the payments of interest made to others.
		2. <i>Mdse. Purchases</i>	[---] An indorsement ordering payment to a certain person.
		3. <i>Notes Payable</i>	[---] An account recording unused fuel.
		4. <i>Cash journal</i>	[---] Compensation paid for the use of money.
		5. <i>Interest Income</i>	[---] An account recording the proprietor's investment in business.
		6. <i>Fuel Expense</i>	[---] An account recording written obligations owed by the business.
		7. <i>T. M. Barr, Drawing</i>	[---] An account recording the receipt of interest from others.
		8. <i>Promissory note</i>	[---] A book of original entry for cash transactions.
		9. <i>Purchases journal</i>	[---] The account to which the total of the sales journal is credited.
		10. <i>Office Supplies Expense</i>	[---] A written promise to pay money at a future date.
		11. <i>Notes Receivable</i>	[---] An account recording the office supplies consumed.
		12. <i>Blank indorsement</i>	[---] An account recording written obligations owed to the business.
		13. <i>Interest</i>	[---] A book of original entry for recording merchandise purchases.
		14. <i>T. M. Barr, Investment</i>	[---] An account recording the fuel consumed.
		15. <i>Sales journal</i>	[---] An account recording unused office supplies.
		16. <i>Special indorsement</i>	
		17. <i>Office Equipment</i>	
		18. <i>Interest Expense</i>	
		19. <i>Mdse. Sales</i>	
		20. <i>Office Supplies on Hand</i>	
		Total Score	[---]

Test II]

COMPLETION TEST

A series of incomplete statements is given below. In each blank space write the word or term which makes the statement complete and true in meaning.

	Score
1. Adjusting entries are recorded in the _____ journal.	
2. The excess of assets over liabilities at a given time is called the _____.	
3. Books kept for the purpose of making the original entries for transactions of the same class are called _____ journals.	
4. The net profit of a business is credited to the <i>Proprietor's</i> _____ account.	
5. The <i>Interest Income</i> and <i>Interest Expense</i> accounts are closed into the _____ account.	
6. Accounts which record transactions from which profits are derived are called _____ accounts.	
7. Statements relative to the opening of a new set of books for a business are recorded in the _____.	
8. A decrease in an asset is _____ to the appropriate asset account.	
9. A written promise to pay a given amount of money at a future date is called a _____.	
10. If assets increase and liabilities increase more than assets, proprietary interest _____.	
11. When cash is paid out for interest, the _____ account is debited.	
12. If assets decrease and liabilities decrease more than the assets, proprietary interest _____.	
13. The journal which records only merchandise sales is called the _____ journal.	
14. If assets increase and liabilities decrease, proprietary interest _____.	
15. If assets decrease and liabilities increase, proprietary interest _____.	
16. The <i>Interest Income</i> account records the amount of cash _____ for interest.	
17. A net profit for a period _____ proprietary interest.	
18. A written promise to pay \$100, given by M. A. Harris to J. W. King, is a note _____ of Mr. King.	
19. An entry debiting <i>Fuel Expense</i> and crediting <i>Fuel on Hand</i> for the cost of fuel consumed during the period is a (an) _____ entry.	
20. An entry debiting <i>Cash</i> and crediting <i>Notes</i> _____ indicates that cash has been received in payment of a note.	
Total Score	----

Test II]

MULTIPLE-CHOICE TEST

A series of statements is given below, each followed by five possible answers. Draw a line under the one of the five which seems to you most nearly correct; in each case underline only one answer.

1. The purchases journal is : (1) a record of the purchases and sales of merchandise (2) a record of merchandise sales (3) a record of cash transactions (4) a record of all assets purchased (5) a record of merchandise bought.
2. The *Office Supplies on Hand* account represents: (1) an expense (2) an increase in income (3) proprietary interest (4) an asset (5) a liability.
3. A negotiable instrument may be: (1) a ruling pen (2) an invoice of goods (3) a cash debit (4) a sales slip (5) a promissory note.
4. An adjusting entry is: (1) a method of locating an error in the trial balance (2) a means of correcting errors in posting (3) a record of sales (4) a means of bringing an account into conformity with the current inventory (5) a closing of the proprietor's profit into his *Drawing* account.
5. A. B. Jones borrows \$600 from John Doe on a 60-day note with interest. The bookkeeper for Mr. Jones should credit: (1) *John Doe* (2) *Notes Receivable* (3) *Cash* (4) *Notes Payable* (5) *Interest Income*
6. A debit to the *Fuel on Hand* account indicates: (1) a decrease in expenses (2) a decrease in liabilities (3) additional income (4) a net loss (5) an increased asset
7. R. N. Coe pays \$10 as interest on a note which he gave T. C. Grant. The bookkeeper for Mr. Coe should debit: (1) *T. C. Grant* (2) *Notes Payable* (3) *R. N. Coe, Investment* (4) *Interest Income* (5) *Interest Expense*.
8. The total of the purchases journal is posted to the debit of: (1) *Mdse. Sales* (2) *Mdse. Purchases* (3) *Mdse. Inventory* (4) *Notes Receivable* (5) *Cash*.
9. If a cash journal entry debiting \$250 to *Office Equipment* is posted to the debit of *Mdse. Purchases* and the error was not corrected: (1) the cost of sales will be overstated (2) the debit side of the trial balance will exceed the credit side by \$500 (3) the credit side of the trial balance will exceed the debit side by \$250 (4) the cash journal will not balance (5) the debit side of the trial balance will exceed the credit side by \$250.
10. Interest is: (1) the income derived from ownership of land (2) the compensation paid for the use of money (3) the proprietor's investment in his business (4) the return that the proprietor receives from his business (5) the account recording notes.
11. A debit to the *Proprietor's Drawing* account indicates: (1) an increased asset (2) a decrease in proprietary interest (3) an additional expense (4) a net profit (5) a decreased liability.
12. A debit to *Cash* in a cash journal records: (1) an increase in cash (2) a decrease in proprietary interest (3) a purchase of merchandise (4) a net loss (5) an expense.
13. The bookkeeper reports that H. C. Brown made a net profit of \$285 last month. When Mr. Brown's ledger is closed, this amount should be credited to: (1) *Profit and Loss* (2) *Mdse. Sales* (3) *H. C. Brown, Investment* (4) *H. C. Brown, Drawing* (5) *Cash*.

Score

Test II]

MULTIPLE-CHOICE TEST (CONTINUED)

14. Fred Lane gave George Marsh a note with interest at 5% for 60 days. To compute the interest at date of maturity the bookkeeper should find the interest for 60 days at 6% and (1) subtract one sixth (2) multiply by 5 (3) divide by 5 (4) divide by sixty and multiply by 5 (5) add one sixth.
15. John Winthrop transferred title to a note by writing across the back "Pay to the order of C. M. Nash" and signing his name. Such an indorsement is: (1) a blank indorsement (2) a qualified indorsement (3) a special indorsement (4) a restrictive indorsement (5) a firm signature.
16. In taking a trial balance of the ledger at the end of the period the bookkeeper overstated the balance of the account of M. A. Taylor, a customer, by \$100. As a result: (1) the expenses for the period will be overstated (2) the *Proprietor's Investment* account will be understated (3) the debit total of the trial balance will be \$100 greater than the credit total (4) the trial balance totals will not be affected (5) the credit total of the trial balance will be \$100 greater than the debit total.
17. The inventory of fuel at the end of a period is found by: (1) subtracting the fuel purchased from *Mdse. Purchases* (2) closing the *Fuel on Hand* account into *Profit and Loss* (3) dividing the amount in the *Fuel on Hand* account by the number of months in the year (4) valuing the fuel actually on hand (5) adding the *Proprietor's Drawing* account to the *Fuel on Hand* account.
18. A. H. Wilson signed his name on the back of a note to transfer the title. His action constituted: (1) negotiable instrument (2) an indorsement (3) an operating expense (4) a value received (5) a withdrawal of cash.

Total Score

WORKING SHEET TEST -- III

From this Trial Balance prepare a working sheet, profit and loss statement, and a balance sheet for A. C. Allen.

Trial Balance for A. C. Allen, May 31, 1940

Cash	\$1680.00	
Notes Receivable	1845.00	
Accounts Receivable	1565.00	
Mdse. Inventory	4750.00	
Store Equipment	315.00	
Auto Trucks	875.00	
Fuel on Hand	210.00	
Office Supplies on Hand	80.00	
Unexpired Insurance	127.00	
Notes Payable		\$ 850.00
Accounts Payable		1095.00
A. C. Allen, Investment		4500.00
A. C. Allen, Drawing	140.00	
Mdse. Sales		6245.00
Sales Returns and Allowances	186.00	
Mdse. Discount on Purchases		60.00
Interest Income		15.00
Purchases Returns and Allowances		175.00
Freight In	115.00	
Rent Expense	160.00	
Salaries	620.00	
Delivery Expense	197.00	
Sundry General Expenses	35.00	
Mdse. Discount on Sales	30.00	
Interest Expense	10.00	

Notations:

Inventories: Merchandise, \$3602.75; Fuel, \$48.50; Office Supplies, \$30.00; Unexpired Insurance, \$118.00.

Test II

MULTIPLE-CHOICE TEST (CONTINUED)

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Lane gave George Marsh a note with interest at 5% for 60 days. To compute the interest at the date of maturity the bookkeeper should find the interest for 60 days at 6% and (1) subtract (2) multiply by 5 (3) divide by 5 (4) divide by sixty and multiply by 5 (5) add e sixth.

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Total Score

WORKING SHEET TEST -- III

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Interest Expense	10.00	

Notations:

Inventories: Merchandise, \$3602.75; Fuel, \$48.50; Office Supplies, \$30.00; Unexpired Insurance, \$118.00.

TEST IV

Insert the word in the blank spaces to make true statements of the following:

1. We owe Smith \$200. He is our _____.
2. When we deposit money in the bank, the amount is recorded in _____.
3. Interest paid by us is called _____.
4. Our note of September 10th for 90 days is due on _____.
5. We give our cash customers a 2% _____ for cash payment.
6. The slip we give to the person paying money to us is a _____.
7. We buy an article marked \$6 at a 25% discount. Our cash price is _____.
8. The order we write upon a bank for payment of money to us is a _____.
9. We wish to send money to a New York firm, and we secure from the post office a _____.
10. When we deposit money at the bank, we make out a _____.
11. A 90-day note for \$500 with interest at 5% yields \$ _____.
12. Cost price plus gross profit on an article equals _____.
13. When we cash a check, we are required to _____.
14. Selling price minus expense equals _____.
15. The price marked on an article is called its _____.
16. Brown owes money to us. He is our _____.
17. Salary paid by us is an _____.
18. The written promise given by one person to pay another is called _____.
19. Bank deposits are guaranteed by the _____.
20. Our assets are \$2000, and our liabilities are \$1000. Our present worth is \$ _____.
21. Money paid for the use of a building is _____.
22. Money paid for the use of money is _____.
23. We can have a 2% discount if we pay for an article in 10 days. The latest day for payment on an article purchased today will be _____.
24. The account of Blue, who owes us money, shows a _____ balance.
25. Interest on \$300 for 10 days at 6% is _____.

TEST V

PART I. In the right-hand column below are statements that correspond to the words in the left-hand column. Place the number of the word that most nearly corresponds to the statement in the blank space of the left-hand column.

Column One

- | | |
|---------------------------|--|
| 1. Creditor. | _____ Money spent for use of a building. |
| 2. Pass Book. | _____ A written promise to pay us. |
| 3. Receipt. | _____ One who owes us money. |
| 4. Deposit ticket. | _____ Assets minus liabilities. |
| 5. Present worth. | _____ A written statement acknowledging the receipt of money. |
| 6. Liability. | _____ An exchange of values. |
| 7. Proprietor. | _____ An order on a bank to pay a sum to a certain individual. |
| 8. Debtor. | _____ The book given the depositor by a bank in which his deposits are recorded. |
| 9. Business Transaction. | _____ Accounts owed by the business. |
| 10. Contract | _____ Currency, checks, drafts, etc. |
| 11. Check. | _____ Anything worth money to us. |
| 12. Net profit. | _____ A list of all open accounts. |
| 13. Cash | _____ Money paid for the use of money. |
| 14. Notes payable. | _____ Our written promise to pay. |
| 15. Asset. | _____ An agreement between two parties to exchange values. |
| 16. Salary. | _____ Money paid for service rendered. |
| 17. Entry. | _____ Gross profit less expenses. |
| 18. Gross Profit. | _____ Sales less cost of goods sold. |
| 19. Due date. | _____ Present value of the business. |
| 20. Trial balance. | |
| 21. Interest income. | |
| 22. Rent expense. | |
| 23. Notes receivable. | |
| 24. Proprietary interest. | |

PART II. The due dates of the following notes dated today are:

- | | |
|----------------------|-------|
| 1. A 30-day note. | _____ |
| 2. A six-month note. | _____ |
| 3. A 60-day note. | _____ |
| 4. A 90-day note. | _____ |

TEST VI

Write in the blank checks below, your checks drawn on the Main Bank, as follows:

1. A check, No. 20, to B. B. Blue for \$20 in payment of invoice 213 of May 2nd, 1940. Fill in stub properly. Your opening balance is \$320, and you have today made a deposit of \$50.
2. A check, No. 21, to B. E. Coe for \$31.50 in full of account.
3. A check, No. 22, to A. A. Mann for \$30 to apply on account.

1. _____

No. _____

_____ 1940

To _____

For _____

Bal Bro't For'd _____

Amt. Deposited _____

"

"

Total _____

Amt. this check _____

Bal. Car'd For'd _____

TEST VI (continued)

2. -----

No. _____

_____ 1940

To _____

For _____

Bal. Bro't For'd	_____
Amt. Deposited	_____
" "	_____
Total	_____

Amt. this check _____

Bal. Car'd For'd _____

3. -----

No. _____

_____ 1940

To _____

For _____

Bal. Bro't For'd	_____
Amt. Deposited	_____
" "	_____
Total	_____

Amt. this check _____

Bal. Car'd For'd _____

TEST VI (continued)

4. Write out your own signature card for the opening of an account at the Main Bank, assuming that you have been introduced by A. K. Black. Consider that the student at your left or right is an officer of the bank who approves. Ask him to approve,

Main Bank of Grand Rapids

Name _____

Address _____

Telephone _____

Introduced by _____

Approved by _____

5. Fill in this signature card at the Fifth Bank.

Fifth Bank of Grand Rapids

Name _____

Address _____

Telephone _____

Introduced by _____

Approved by _____

6. Today you make a deposit at the Main Bank. Prepare in the blank below your deposit slip, depositing the following items: Currency, \$25; Silver, \$47; local checks on the First Bank, \$7 and \$12; a check on the Large Bank of Detroit for \$80; and a check on the Second Bank of Cleveland for \$30.

TEST VI (continued)

6 -

Main Bank of Grand Rapids
Deposited for the account of

Grand Rapids, Michigan 1940
=====

List each check separately

Checks

Currency _____

Silver _____

Total

TEST VII

In the space below prepare a reconciliation of bank statement from this information: Our check book balance on May 31st is \$520. The balance as per the bank statement is \$817.

These checks are outstanding:

No. 39 - \$10.50, No. 42, \$35.00, No. 44 - \$17.20,
No. 45 - \$18.40, No. 46, \$72.00, No. 47 - \$25.60,
No. 48 - \$19.25, No. 49, \$ 7.30, No. 50 - \$ 3.75,
No. 51 - \$78.00, No. 52 - \$10.00.

APPENDICES -- APPENDIX B

Trial Balance Central High School, May 31, 1940

Cash	3361.08	
Athletic Association		298.90
School Store		614.42
General Fund		231.94
Helios		737.88
Locker Fund		89.40
Class of 1940		319.77
Band and Orchestra		67.29
Music Department		102.96
Agona Club		14.90
Biology Club		24.06
"C" Club		31.64
Classical Club		54.65
Conservation Club		1.74
Domecon Club		34.67
English Department		55.68
G.A.A.		54.36
History Department		5.23
Hi "Y"		12.44
Class of 1941		3.05
National Honor Society		19.00
Sock and Buskin		171.13
Current Events Club		2.08
LeCircle Francais		17.80
Math Department		13.33
Art Club		20.85
Curtain Fund		287.77
Math Club		6.37
Charity Fund		15.71
Ellen Dean Fund		10.20
Phy-Chem		5.04
Jr. Red Cross		1.12
Sr. Girl Reserves		5.42
Bars and Chevrons		.14
Treble Clef Club		4.04
Jr. Hi "Y"		.36
Student Council		25.19
Pen and Pencil Club		.55
	<u>3361.08</u>	<u>3361.08</u>

Reconciliation of bank statement, May 31, 1940.

Balance as per bank statement	3541.36
-------------------------------	---------

Deduct checks outstanding:

2205	1.50	
2263	1.80	
2400	5.40	
2452	2.25	
2462	.50	
2486	7.69	
2488	5.00	
2493	1.03	
2505	5.00	
2508	10.00	
2513	2.80	
2514	11.50	
2516	7.21	
2517	2.50	
2518	20.50	
2520	50.00	
2522	2.30	
2523	10.00	
2524	20.00	
2526	1.80	
2527	1.95	
2528	2.00	
2529	5.00	
2530	<u>2.55</u>	<u>180.28</u>

Balance as per check book:	3361.08
----------------------------	---------

Principal

Order on School Treasurer
Central High School

2159
19____ No.____

Pay to the order of _____ \$ _____
Dollars

In Payment for _____

Charge Fund _____ Secretary-Treasurer

Adviser

*Invoice or receipt must be furnished covering
each purchase to be paid by this order*

in account with

CENTRAL HIGH SCHOOL TREASURER

Balance _____ \$ _____

Signed

Central High School
Treasurer's Receipt

No.

.....19.....

Received from.....\$.....

.....Dollars

For.....

Fund.....

Treasurer

ROOM USE ONLY

Nov 29 '41

Aug 3 '49

Jul 23 '42
Aug 10 '44

Feb 16 '50

Jul 29 '46

Jul 26 '51

May 9 '47

May 15 '53

Jun 3 '47

Jun 5 '53

Feb 16 '48

AUG 19 '55
Mar 15 '56

Apr 4 '57

Jul 22 1948

Aug 8 '57

Jan 31 '59

Aug 9 '48

Feb 16 '59

Mar 2 '59

Nov 29 '48

~~JAN 29 1961~~

Dec 16 '48

Jan 5 1949

Feb 9 1949

~~JUN 26 1963~~

Mar 12 '49

Jul 13 '48

~~JUL 9 1963~~

Jul 20 '45

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