THE STATUS OF SOME PHASES OF COMMERCIAL EDUCATION IN 39 PUBLIC SENIOR HIGH SCHOOLS OF NEW MEXICO IN 1929.

by

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Instructor in charge.

August 1929.

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Head or chairman of department.
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H. T. Lehmann.
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CHAPTER I

Introduction.

A large percentage of our boys and girls are connected with business pursuits in one way or another sometime in their life. According to the United States Department of Commerce, 7.5 percent of the persons 10 years of age and over are employed in clerical occupations. The number of persons 10 years of age and over in each general division of occupations is indicated in Table I.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>1910</th>
<th>1920</th>
<th>1910</th>
<th>1920</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>12,659,082</td>
<td>10,953,158</td>
<td>33.2</td>
<td>26.3</td>
</tr>
<tr>
<td>Animal husbandry</td>
<td>965,169</td>
<td>1,090,223</td>
<td>2.5</td>
<td>2.6</td>
</tr>
<tr>
<td>Manufacturing and mechanical industries</td>
<td>10,628,731</td>
<td>12,818,524</td>
<td>27.8</td>
<td>30.8</td>
</tr>
<tr>
<td>Domestic and personal service</td>
<td>3,772,559</td>
<td>3,404,892</td>
<td>9.9</td>
<td>8.2</td>
</tr>
<tr>
<td>Professional service</td>
<td>1,772,559</td>
<td>2,143,889</td>
<td>4.4</td>
<td>5.2</td>
</tr>
<tr>
<td>Public service</td>
<td>459,291</td>
<td>770,460</td>
<td>1.2</td>
<td>1.9</td>
</tr>
<tr>
<td>Clerical occupations</td>
<td>1,737,053</td>
<td>3,126,541</td>
<td>4.6</td>
<td>7.5</td>
</tr>
<tr>
<td>Transportation</td>
<td>2,627,420</td>
<td>3,963,512</td>
<td>6.9</td>
<td>7.4</td>
</tr>
<tr>
<td>Trade</td>
<td>3,514,670</td>
<td>4,242,979</td>
<td>9.5</td>
<td>10.2</td>
</tr>
</tbody>
</table>

1. The Statistical Abstract of The United States, 1928, pp. 49, Table No. 43.
If there are 3,126,541 persons above ten years of age specifically employed in clerical occupations, it seems that training for these occupations should be included in the curriculum of the public high schools. Furthermore, it is apparent that nearly every person must be able to attend the business matters in the home, and in this respect commercial education makes its contribution to training for citizenship.

As reported in the Statistical Abstract of the United States, there were 739 private commercial or business schools with an enrollment of 188,363 students in 1925. The question arises, can these 739 private commercial or business colleges train enough clerical experts to meet a demand of an occupation requiring 3,126,541 persons. This is saying nothing of the general business training needed by persons employed in other occupations such as trade, transportation, etc.

The increase in enrollment in the secondary schools was from 357,813 in 1890 to 4,132,125 in 1925. The enrollment in private commercial schools increased from 78,920 to 188,363 in the same period, manifesting that the private commercial schools are not keeping pace with the secondary schools.

That this increase in enrollment is not a recent development is shown by the following table.

**TABLE II.**

<table>
<thead>
<tr>
<th>Schools and Number of Students</th>
<th>Number of Students Enrolled in Commercial Courses in High Schools and Private Commercial Schools in 1893 and 1915.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public high schools.</td>
<td></td>
</tr>
<tr>
<td>1893</td>
<td>1915</td>
</tr>
<tr>
<td>Percent increase.</td>
<td></td>
</tr>
<tr>
<td>3,864</td>
<td>11,674</td>
</tr>
<tr>
<td>Number enrolled in private commercial schools.</td>
<td></td>
</tr>
<tr>
<td>115,748</td>
<td>183,286</td>
</tr>
<tr>
<td>Percent increase.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>58.7</td>
</tr>
<tr>
<td>Number of students in high schools.</td>
<td></td>
</tr>
<tr>
<td>254,023</td>
<td>1,328,684</td>
</tr>
<tr>
<td>Percent increase.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>423.1</td>
</tr>
<tr>
<td>Number of students in commercial courses in high schools.</td>
<td></td>
</tr>
<tr>
<td>15,220</td>
<td>208,605</td>
</tr>
<tr>
<td>Percent increase.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,270.5</td>
</tr>
</tbody>
</table>


According to table II the number of students enrolled in public high schools increased 423.1 percent from 1893 to 1915 while the number enrolled in private commercial schools increased 58.7 percent for the same period. The students enrolled in commercial courses for the period 1893 to 1915 increased 1,270.5 percent, showing that the demand for commercial training is increasing.

F. V. Thompson, Assistant Superintendent of Schools, Boston, Massachusetts said, "It is hardly necessary today to argue for the adoption of commercial education as a part of our system of public education. Commercial education some time ago passed through the period of struggle for recognition; we are now asking..."
ourselves about the value of the kind of commercial education which has been established in our high school system. Out of an annual budget of $5,000,000 the city of Boston is spending about $700,000 annually for commercial education.  

The facts just presented seem to indicate that the tendency toward increased enrollment in the secondary schools and in commercial curricula is not recent, and that the demand for commercial training is increasing tremendously.

A further insight into the increase of enrollment in commercial schools is indicated in table III.  

TABLE III.

<table>
<thead>
<tr>
<th>Schools</th>
<th>1914</th>
<th>1918</th>
<th>1924</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public high schools</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>63,600</td>
<td>104,418</td>
<td>145,991</td>
</tr>
<tr>
<td>Women</td>
<td>92,650</td>
<td>173,357</td>
<td>286,984</td>
</tr>
<tr>
<td>Private high schools and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>academies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>9,717</td>
<td>9,157</td>
<td>6,257</td>
</tr>
<tr>
<td>Women</td>
<td>7,740</td>
<td>14,644</td>
<td>11,941</td>
</tr>
<tr>
<td>Private business and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>commercial schools</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>85,432</td>
<td>96,449</td>
<td>68,247</td>
</tr>
<tr>
<td>Women</td>
<td>82,631</td>
<td>193,130</td>
<td>120,116</td>
</tr>
<tr>
<td>Colleges and Universities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men No figures</td>
<td>14,022</td>
<td>40,774</td>
<td></td>
</tr>
<tr>
<td>Women No figures</td>
<td>2,982</td>
<td>6,318</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>608,666</td>
<td>685,100</td>
<td></td>
</tr>
</tbody>
</table>

2. Bureau of Education; Bulletin No.4, 1928
   Commercial Education in 1924-1926. pp. 2.
J. O. Malott says: "There is a growing consciousness of the importance of definite preparation for business occupations. Educators have given increased attention to this phase of education in order to develop a balanced program that will meet the best interests of the individual, the business community and society."

According to table III, during the period 1915 to 1924 the enrollments in the commercial curricula in colleges and universities increased from 9,323 to 47,552 an increase of 410 percent. The number of pupils enrolled in commercial curricula in the public schools from 1914 to 1924 increased from 161,350 to 430,975 an increase of 267 percent. Of the total 685,100 pupils and students preparing for business occupations in 1924, almost two-thirds were enrolled in the public high schools. The enrollment in commercial curricula in private high schools or academies increased 4 percent from 1914 to 1924. In private business or commercial schools, the increase in the period 1914 to 1924 was 12 percent.

The above facts indicate that the demand for commercial training is increasing and that this demand is not being met by the private commercial schools. The increased demand for commercial training is manifested by the increase in the number of students enrolled in

commercial curricula. The facts show that this demand has been increasing steadily since 1930 and the probability is that it will continue to do so in the future.

J. O. Malott states, "The commercial courses in the secondary schools are generally more appropriate for women than for men." 1

In table II it may be observed that there are more women enrolled in each class of commercial schools than men with the exception of colleges and universities. Assuming that the enrollment is an indication of the appropriateness of the commercial curricula being offered, the present organization of commercial curricula is not as appropriately adapted to the needs of the men as the women, and, consequently, presents a problem which should be solved.

In a study made by F. J. Weersing of the larger and better equipped high schools in Minnesota, more than 35 percent of the pupils enrolled in these schools are taking commercial subjects and that almost 60 percent of the graduates of 1926 and 1927 took commercial subjects at some time. The investigation showed that less than one-third of those who take commercial studies enter commercial or clerical vocations even

temporarily. 1 F. J. Weersing says, "There is some justification for assuming that the determination of the non-vocational aims and values of commercial education probably constitutes one of the most urgent problems confronting teachers, heads of commercial departments, and school administrators."

C. C. Crawford, Head of the Commercial Department at Ottawa, Kansas says, 2 "Today the larger part of commercial education is furnished by the public schools, and only in the larger cities does one find the business colleges being a success. Commercial education will never be at its best until better instructors are secured. The business college graduate usually has some practical experience in business, but often lacks a training in those subjects which are very necessary, such as psychology, methods of teaching, and other subjects that tend to broaden the mind of the instructor."

C. A. Herrick of Girard College Philadelphia, Pennsylvania states, "The demand for vocational education in American secondary schools is one of the most significant and perplexing aspects of recent educational development. One of the most unfortunate

aspects of commercial education in America is the lack of interest in the subject by business men themselves and in the lack of agreement as to whether special education is necessary and if so of what shall it consist. The commercial work has hitherto not generally been organized as a curriculum devoted to a specific object. Instead it has been a loosely formed group of elective studies to which were added a certain number of vague subjects, and as such has failed to give the unity necessary in any really effective system of education. ¹

R. G. Walters, head of the commercial department at Grove City, Pennsylvania says, "Definite aims should be sought; high standards should be set; and above all, the qualifications for teaching commercial subjects should be on a par with those for teaching any other secondary branches. ²"

David Snedden of Columbia University says, "Commercial education now occupies a large place in secondary education. At present this education is a mongrel thing, it pretends to be vocational, but in reality it is only partly and confusedly so. ³"

A. R. Tarr quotes Miss Cahill, who spent 13 years in Wall Street offices before entering the teaching profession, as follows: "Commercial education

¹ Bureau of Education; Bulletin No.55. 1919.
is on the toboggan in New York City. In fact, I can see it in a ditch, unless the commercial teachers swing the sled. The whole schedule of commercial education is not well laid out. The amount of credits allowed in commercial courses for commercial subjects is meager and absurd. 1

J. O. Malott states, "A survey of educational and business literature, including reports pertaining to statistics, researches, courses of study, conferences, school systems, universities, and business men's organizations, reveals a greater interest and activity in this phase of education than during any similar period. Some of the important developments pertain to increased enrollments, definite objectives, course of study revision, and research. An outcome of this increased interest is the tendency toward scientific curriculum revision. The various researches and the different points of view represented by these groups are making the objectives clearer and more definite. The clear and convincing findings of researches and investigations are contributing a fact basis for this phase of education and revealing the urgent need for preparation for particular occupations. 2"

With the evidence previously presented, it is

apparent that there are numerous deficiencies in our present system of commercial education. There is considerable disagreement concerning the make-up of the commercial courses, qualifications of teachers, methods of teaching, etc., in commercial education. This is probably due to the lack of research in the field to provide a factual basis for the formulation of principles upon which to construct a thoroughgoing program. The future, then, of commercial education, as J. O. Malott has suggested, depends to a large degree upon research in the field. It is not only a problem for school administrators, but for every commercial teacher to contribute as much as possible to the discovery of better and new practices.
CHAPTER II.

Related Literature.

A survey of the accessible literature concerning commercial education discloses three studies that are directly related to the one being carried out.

F. P. O'Brien, Director of the Schools Service and Research Bureau of the University of Kansas has made a study of commercial education in 243 public high schools in Kansas in which 338 teachers were employed and 16,000 students were instructed in business or commercial subjects.1

The information for this study was secured by means of a questionnaire. The high schools from which the information was obtained concerning commercial of business instruction represent an aggregate enrollment somewhat in excess of 50,000 students. The schools varied in size from fewer than 25 to more than 3,000 students enrolled.

The findings or conclusions of F. P. O'Brien's study are as follows:

1. The enrollment in commercial courses constitutes nearly one-third of the total enrollment in the high schools reporting.

2. Slightly less than half of the students enrolled in commercial courses were boys.

3. Half of the smaller high schools had no students graduate from the commercial courses in 1926 and 1927, and half of the remaining schools had from 1 to 3 graduates in that year.

4. In the schools having fewer than 200 students 43 percent of the classes in business or commercial subjects had not more than 10 students enrolled.

5. The average experience of the teachers in the teaching of commercial subjects was 5 years in the larger schools and 2 years in the smaller schools.

6. Thirty percent of the teachers reporting had no college degree, although many of them had attended college. Half of the teachers had graduated from teacher's colleges in Kansas. Thirteen had a master's degree and 75 had some graduate credit.

7. Attendance at a business college was reported by 24 percent of the teachers.

8. Forty percent of the teachers who were offering business or commercial instruction had not specialized in college in the type of work which they were teaching. A portion of these teachers had studied in a business college but a majority of them had not done so.

9. The teachers who had apparently received no training
for the type of work which they were teaching were usually teaching two or more classes in business subjects.

10. The monthly salaries of the teachers of business subjects varied from less than $150.00 to more than $250.00, with a general average of about $170.00.

11. More than half of the teachers of business subjects in the smaller schools were also teaching one or more non-commercial subjects. This was true of only 1 in 7 of the teachers in the larger high schools.

12. The teaching load of commercial teachers varied from less than thirty-one to more than 150 student-hours of instruction per day, and the number of classes per day varied from 1 to 8.

13. Two-thirds of these teachers were charged with some form of extra-curricular activities. One-fourth of them were charged with two or more other activities than teaching.

14. That a clearer definition of objectives, content and standards is needed in business courses of study is made evident by what is omitted and by what is included in some of the courses of study.

C. O. Burden of the University of Indiana has made a study in which he attempted to ascertain: 1 (a) the curriculum offerings in various types of schools;

(b) methods used in instruction, (c) training and experience of commercial teachers, (d) extent and amount of commercial equipment, (e) placement work attempted, (f) suggestions and criticisms offered by the teachers in the field.

The information was secured by means of a questionnaire. The study included 81 senior high schools and 4 junior high schools, having an enrollment from less than 50 to over 2200 students.

The findings of C. O. Burden's study are as follows:

1. There was much variation in the number of commercial units required for graduation in the schools offering the commercial curriculum.

2. The requirements for graduation in the commercial curriculum are the same for the boys as for the girls.

3. The scholarship of commercial students in somewhat higher than that of the students in academic subjects.

4. Commercial work is popular where offered. About one-fourth of the school enrollment are taking commercial work when the opportunity presents itself.

5. The high school commercial course is still dominated by heredity. It is still in the grip of its inheritance from the business colleges from which it so largely sprang. The high school commercial course has in a great measure remained as it began, a technical training course, giving instruction in mechanical routine.
6. The commercial course has never clearly allied itself with the traditional purposes of American high schools. There has been an attachment, but not a coalescence.

7. The possibilities of the high school commercial course, either as utilitarian or as a social course, have not been perceived; or, if they have been perceived, that perception has not been expressed by an adequate organization of work. There is a lack of clearly determined purpose.

8. Aid is needed in the preparation of texts which, dealing with this complex material of the social-business world, shall so organize it that duplication can be largely eliminated.

9. The requirements in the social-business group of subjects are not as extensive as the offerings. The requirements are most extensive in those subjects which are most commonly given.

10. The commercial teachers of the Indiana high schools are quite well trained, at least in general education. The median training for all teachers was 36 months.

11. The reports show that commercial teachers as a group are in touch with modern education. Eighty-three percent having attended a higher institution at some time in the last five years.

12. The teachers of commercial subjects have had, on an average, 63 months of teaching experience.
13. Seventy-four teachers have an average of 12 months of business experience.

14. The most common length for the teaching period is 45 minutes.

15. The average number of teaching periods per week was 31.

16. The average number of pupils taught daily was 93.5 per teacher.

17. Thirty percent of the teachers teaching commercial subjects teach other subjects as well.

18. Eighty-five percent of the teachers teaching commercial subjects have had special training in some higher institution in the subject or subjects which they are teaching.

19. In the cities from 30,000 to 100,000 population, the median salary paid Indiana high school teachers was $2017. For commercial teachers $2000.

20. No definite standards have been set for high school commercial teachers.

21. The median salary of the commercial teachers is below that for all high school teachers of Indiana.

22. Fifty-three percent of the schools reported the use of tests in attempting standardized measurement.

23. Scientific tests to measure progress in skill under standardized conditions have not been worked out and are not applied.

24. No one has yet proved what the proper length of the
typewriting and stenographic courses should be. Neither has the skill which should be acquired with definite hours of work been ascertained.

25. The supreme need of commercial schools is to find more points of contact between the school and the business world.

26. There is great lack of equipment for commercial work in the Indiana high schools. Few of the schools reporting have much in the way of equipment other than bare necessities.

27. Only 26 percent of the schools reporting have attempted an organization of an extra-curricular sort open to commercial students only.

28. A few of the high schools are doing little in the way of placement for their commercial students, but only eight schools report a well established bureau in connection with the commercial department.

29. Although the commercial courses have been considerably multiplied by business demands and as a result of the efforts of salesman for textbook and machine companies, many features of the course are almost static.

30. In its technical training for business, no proved policy has been adopted. Courses of every variety of length, and, although there is no reason to believe that this is the result of scientific experiment.
31. Requirements in technical subjects are based upon what school officers believe to be the immediate demands of business, with little regard for the more permanent needs of the student.

32. In the social-business subjects offered, the weaknesses of the present courses gather around the lack of clearly defined purposes.

33. There seems to exist a wide lack of knowledge, even of opinion, as to what the school should attempt to teach the student. The variety of lengths of courses, the variety of requirements, the variety of textbooks, all indicate this situation.

34. The greatest strength of the secondary commercial course as regards social-business subjects is the very evident desire to do something. Nearly every school offers such subjects and indicates that they are of increasing moment. There is a strong spirit to socialize the business course. That spirit is in need of guidance.

35. The gigantic gains in number of students, the interest of the public, the new courses which are being constantly introduced, and the demands for commercial teachers, all give evidence that commercial work is advancing.

Leverett S. Lyon, instructor of commercial organization of the University of Chicago has made a study of commercial education in the United States. By means of a questionnaire he secured information
concerning commercial education in 36 high schools
from 26 of the 36 states included in the report of the
Commissioner of Education in 1914.\textsuperscript{1}

The findings of Lyon's investigation are as follows:

1. The high school commercial course is still
dominated by heredity.

2. The commercial courses in the high schools are
classified into what are commonly called the "short
course" and the "four-year course".

3. The commercial course has never clearly allied
itself with the traditional purposes of the American
high schools.

4. The possibilities of the high school commercial
course have not been expressed by an adequate organization
of work.

5. The social-business subjects have found their
way into the secondary schools to a considerable degree.
Nearly every subject which would be considered as
important in a modern university school of commerce has
found some place in the secondary school curriculum.

6. The requirements in social-business subjects
are not as extensive as the offerings. Requirements are
most extensive in those subjects which are most commonly
given.

7. The social-business subjects lack clearly

\textsuperscript{1} Lyon, L. S. - Supplementary Educational Monograph.
defined purposes and methods.

8. Electives for commercial students are quite open and free.

9. There is need for different work for boys and girls.

10. No secondary institution has organized really thoroughgoing courses, clearly designed to train for business administration.

11. Thirty-three percent of the students enrolled in high schools are enrolled in commercial subjects.

12. Thirty-two percent reported that a "short course" and a "four-year course" was given in the high school. Forty-one percent report the "short course" only.

13. The length of the "short course" was 2 years in 62 percent of the schools reporting and 3 years in 28 percent of the schools reporting.

14. The length of the time required in technical commercial subjects in the "four-year" commercial course shows wide variation.

15. The lack of uniformity which exists in the length of courses in these technical subjects, where one naturally expects a considerable degree of standardization, is indicative of the uniformity which is needed and of the uncertainty that seems to pervade commercial education in the high school.

16. The academic subjects are hardly noticed by the
formulators of "short" commercial courses.

17. Ninety-four percent of the 115 schools reporting require three years or more of English in the "four-year" commercial course.

18. An examination of the general subjects required in the "four-year" commercial course shows that commercial work and academic training have not established intimate relations.

19. Commercial organization, advertising and salesmanship are, respectively demanded of the pupils in slightly more than one-third of the schools which offer these subjects.

20. The social-business subjects are taught by teachers of other departments in a considerable number of instances.

21. The social-business subjects are directed by a combination of the commercial department and other departments in a considerable number of cases.

22. Commercial course graduates do not enter college. The trifling percentage of those who go on either for commercial work or for other work is almost negligible. There is little in the commercial course as at present organized to lead a child who does not come from a home interested in college work toward the fields of higher education.

23. The methods of schools in business teaching are weak in that they are not instruments which have been
devised to accomplish definite ends.

24. There is need for surveys and studies which will help to determine the purposes of commercial education.
CHAPTER III.

Specific Problem. Method of Procedure.

This study consists of an attempt to discover what the prevailing practices in commercial education are in the public senior high schools of New Mexico. The study was limited to senior high schools because of the misunderstandings which would arise in interpreting the questions of an inquiry blank including both.

Obviously, the first question that arises in connection with the main issue pertains to what information such a study should or should not include in order to answer its original purport. After some consideration of the purpose in view, it was decided that information concerning the following questions would be desirable.

1. What is the total enrollment of the senior high school?

2. What is the total number of senior high school students enrolled in commercial subjects?

3. Do the high schools offer a two-year commercial course?

4. Do the high schools offer a three-year commercial course?

5. Do the high schools offer a four-year commercial course?

6. How many senior high school teachers are teaching
nothing but commercial subjects?

7. How many senior high school teachers are teaching academic subjects in addition to commercial subjects?

8. How many pupils are enrolled in the two-year, three-year and four-year commercial course?

9. What activities other than teaching do the commercial teachers take part in?

10. Is there a course in the senior high school designed especially for students who are planning to go into business, but do not want to do office work?

11. What commercial subjects are offered in the senior high school?

12. What is the length of each commercial subject in weeks?

13. How many periods per week is each commercial subject taught?

14. What semester is each commercial subject offered?

15. How many boys and how many girls are enrolled in each commercial subject?

16. How many minutes are allotted to each period in each commercial subject?

17. What is the name of each high school reporting?

18. What textbook is used in each of the commercial subjects?

19. What is the name of each person giving information?
20. How much teaching experience does each commercial teacher have (a) in the senior high school, (b) in the junior high school and (c) in the elementary school?

21. How much training have the senior high school commercial teachers had in a (a) college, (b) university and (c) business college?

22. What degrees do senior high school commercial teachers hold?

23. How many semester hours of education (strictly professional courses) do the commercial teachers have?

24. How many semester hours of graduate credit do commercial teachers have?

25. What salaries do the commercial teachers receive?

26. What was the major and minor subject of the commercial teachers in college?

27. What is the name of the college or university which the commercial teachers attended?

28. What is the name of the business college which the commercial teachers attended?

The second question which presented itself was how the information could be secured with the greatest ease and the least expense. The information could have been secured by traveling to the different high schools and interviewing each of the commercial teachers personally. The expense of this technique, however, would have proven prohibitory. The information might possibly have been
secured from the state records in the state super-
intendents office, but these records were too meager to
give the necessary information. It was finally decided
that the questionnaire method would be the most practical
method of collecting the information for this study.

The third problem was to determine how much
of the desired information presented above could be
obtained by a questionnaire. After serious consideration
of the principles of formulating the questions of an
inquiry blank and with the advice and criticism of the
advising instructor and a seminar class, it was concluded
that the following questions should be included in the
inquiry blank in this study:

1. What is the total enrollment of the senior
high school?

2. What is the total number of senior high
school students enrolled in commercial subjects?

3. How many senior high school teachers are teaching
nothing but commercial subjects?

4. How many senior high school teachers are
teaching academic subjects in addition to commercial
subjects?

5. Is there a course in the senior high school
designed especially for students who are planning to
go into business, but who do not want to do office work?

6. What commercial subjects are offered in the
senior high school?
7. What is the length of each commercial subject offered in weeks?
8. How many periods per week is each commercial subject taught?
9. What semester is each commercial subject offered in the senior high school?
10. What is the name of the high school reporting?
11. What textbook is used in each of the commercial subjects?
12. What is the name of each person giving information?
13. How much teaching experience does each commercial teacher have in (a) the senior high school and (b) the junior high school?
14. How much training do the senior high school commercial teachers have in (a) college, (b) university and (c) business college?
15. What degrees do the senior high school commercial teachers hold?
16. How many semester hours of education (strictly professional courses) do commercial teachers have?
17. How many semester hours of graduate credit do commercial teachers have?
18. What salaries do the commercial teachers receive?
19. What is the major and minor subject of the senior high school commercial teachers in college?
The fourth question that arose was that of formulating an inquiry blank which would secure the information as accurately as possible. It was decided that the information could be secured best by two separate inquiry blanks, one inquiry blank requesting general information to be filled out by the head of the commercial department and one requesting information concerning the teacher to be filled out by the commercial teachers. It was necessary to send one of the inquiry blanks concerning the teacher to the head of the commercial department because in a large percent of the senior high schools the head of the commercial department teaches some classes. The questionnaires were formulated and printed and presented to the advising instructor and a seminar class for criticism. The questionnaires were reconstructed and again criticized. The resulting three inquiry blanks may be found in the appendix pages 1, 2, and 3.

The fifth problem involved was that of formulating the letters of explanation which were to accompany the inquiry blanks. A letter which was to accompany the first inquiry blanks sent out, was prepared and presented to the advising instructor and a class in seminar for criticism and advice. The letter was then reconstructed and again presented for criticism and advice. The resulting letter may be found in the appendix page 4. The letter which was to accompany the
The second set of inquiry blanks sent out was prepared in the same way and may be found in the appendix page 5.

The sixth step in the process was that of mailing the inquiry blanks. The inquiry blanks were mailed to the head of the commercial department of all of the high schools in New Mexico. A list of the schools to which the inquiry blanks were sent may be found in the appendix page 6.

One general and one specific inquiry blank to the head of the commercial department; one, two, or three (depending upon the size of the city) inquiry blanks directed to the commercial teachers; a copy of the letter explaining the purpose of the inquiry blanks; and a stamped self-addressed envelope were enclosed in each envelope the first time that the inquiry blanks were sent out. The head of the commercial department was requested to hand to each teacher in that department one of the inquiry blanks directed to commercial teachers. With the second set of inquiry blanks that were sent out, the letter which was prepared for the second-sending, was enclosed in addition to the letter and inquiry blanks that were sent out the first time.

The inquiry blanks were first sent out March 15, 1929. This time was chosen because it is during the season in which there is fewest holidays, and by
this time all new teachers should be acquainted in the school in which they were teaching. Sometimes, if a teacher receives an inquiry blank during or near a holiday season, it may be lain aside with the intention of answering it later and, consequently, never is answered. Frequently a teacher who is new in a system has other matters that are more pressing and, consequently, does not answer the inquiry blank.

Returns were received from 21 or 38 percent of the schools by April 10, 1929, when the second set of inquiry blanks was sent out. By June 1, 1929, the date after which no reports were accepted, returns were received from 23 or 43 percent more of the total number of schools. Of the 55 high schools to which the inquiry blanks were directed, reports were received from 44 of 80 percent of all the schools.
CHAPTER IV.

Presentation and Interpretation of Facts.

The inquiry blanks used in this study were sent to the fifty-five high schools in New Mexico as reported in the New Mexico Educational Directory 1927-1928. Of the 55 high schools to which the inquiry blanks were directed, reports were received from 44, five of which stated that they were offering no commercial work in the high school. Of all the high schools asked to cooperate in this study, 80 percent reported the information requested.

The distribution of the total enrollment of all the high schools participating in this survey is presented in Table IV. Table IV includes the enrollment of four-year high schools in the smaller systems, and the enrollment in the three-year senior high schools in the larger cities.

TABLE IV.
THE TOTAL ENROLLMENT OF HIGH SCHOOLS PARTICIPATING IN THIS STUDY.

<table>
<thead>
<tr>
<th>Number of schools</th>
<th>1</th>
<th>7</th>
<th>12</th>
<th>5</th>
<th>5</th>
<th>2</th>
<th>3</th>
<th>0</th>
<th>1</th>
<th>3</th>
<th>39</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number enrolled</td>
<td>49</td>
<td>99</td>
<td>149</td>
<td>199</td>
<td>249</td>
<td>299</td>
<td>349</td>
<td>399</td>
<td>449</td>
<td>499</td>
<td>599</td>
</tr>
</tbody>
</table>

The median enrollment per school of all the high schools reporting was 93. The total enrollment of the 39 schools reporting was 5,412. Two of the high
schools reporting have a total enrollment of six students and one high school has a total enrollment of 652 students.

An attempt was made to secure the number of students enrolled in commercial subjects in the high schools from which the information was obtained. The total number of students who were enrolled in commercial subjects of the schools reporting is presented in table V.

TABLE V.

<table>
<thead>
<tr>
<th>THE TOTAL NUMBER OF STUDENTS ENROLLED IN COMMERCIAL SUBJECTS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number enrolled report</td>
</tr>
<tr>
<td>Number of schools</td>
</tr>
</tbody>
</table>

The median enrollment in commercial subjects of the schools reporting was 37. The total enrollment in commercial subjects of all the schools reporting was 1549. Of the 38 schools reporting one school had an enrollment of 125 students in commercial subjects and five schools had less than 10 students enrolled in commercial subjects.

The total enrollment and the enrollment in commercial subjects may be compared (1) by the total enrollment in each and (2) by the median enrollment in each. The enrollment in commercial subjects is 29 percent of the total enrollment. The median enrollment of the high schools giving information was 98 and the median enrollment in commercial subjects
was 37.

An attempt was made to determine how many high school teachers were teaching nothing but commercial subjects, and how many were teaching academic subjects in addition to commercial subjects. The number and percentage of senior high school teachers teaching nothing but commercial subjects and those teaching academic subjects in addition to commercial subjects per school is presented in Table VI.

**TABLE VI.**

THE NUMBER AND PERCENTAGE OF SENIOR HIGH SCHOOL TEACHERS TEACHING NOTHING BUT COMMERCIAL SUBJECTS AND OF THOSE TEACHING ACADEMIC SUBJECTS IN ADDITION TO COMMERCIAL SUBJECTS PER SCHOOL.

<table>
<thead>
<tr>
<th>Number of schools having teachers</th>
<th>Number and percent of teachers teaching only commercial subjects</th>
<th>Number and percent of schools having teachers teaching subjects in addition to commercial subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>9 23.1</td>
<td>16 41.1</td>
</tr>
<tr>
<td>1</td>
<td>29 74.4</td>
<td>14 35.9</td>
</tr>
<tr>
<td>2</td>
<td>0 0.0</td>
<td>2 5.2</td>
</tr>
<tr>
<td>3</td>
<td>0 0.0</td>
<td>2 5.2</td>
</tr>
<tr>
<td>4</td>
<td>0 0.0</td>
<td>0 0.0</td>
</tr>
<tr>
<td>5</td>
<td>0 0.0</td>
<td>1 2.5</td>
</tr>
<tr>
<td>No report</td>
<td>1 2.5</td>
<td>4 10.1</td>
</tr>
<tr>
<td>Total</td>
<td>39 100.0</td>
<td>39 100.0</td>
</tr>
</tbody>
</table>

One may observe that nine schools or 23.1 percent of the schools reporting have no teachers teaching only commercial subjects. Twenty-nine or
74.4 percent of the schools have one teacher teaching only commercial subjects. Sixteen or 41.1 percent of the schools reporting have no teachers teaching academic subjects in addition to commercial subjects. Fourteen or 35.9 percent of the schools have one teacher teaching academic subjects in addition to commercial subjects.

All of the high schools report that they do not have a course designed especially for students who are planning to go into business, but do not want to do office work.

The diversity of the kind of commercial subjects offered is of great importance to the people who are working in this field. In trying to determine what subjects are offered, questions were asked concerning all of the possible commercial subjects. The number of high schools offering the different commercial subjects and the length of each subject in weeks is indicated in table VII.

It was found that there is considerable difference in the kind of subjects offered by the different high schools. Typewriting I was offered by 38 of the 39 schools reporting. Bookkeeping I was offered by 34 schools and Shorthand I by 31 schools. Advanced Shorthand and Accounting was offered by one school each.
TABLE VII.

THE NUMBER OF HIGH SCHOOLS OFFERING THE DIFFERENT COMMERCIAL SUBJECTS AND THE LENGTH OF EACH SUBJECT IN WEEKS.

<table>
<thead>
<tr>
<th>Name of subject</th>
<th>Number of schools offering each subject</th>
<th>The number offering each subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typ. I.</td>
<td>0 33 5</td>
<td>38</td>
</tr>
<tr>
<td>Typ. II.</td>
<td>0 20 6</td>
<td>26</td>
</tr>
<tr>
<td>Sh't'd. I.</td>
<td>0 28 3</td>
<td>31</td>
</tr>
<tr>
<td>Sh't'd. II.</td>
<td>0 12 4</td>
<td>16</td>
</tr>
<tr>
<td>DKng. I.</td>
<td>0 28 6</td>
<td>34</td>
</tr>
<tr>
<td>DKng. II.</td>
<td>0 3 4</td>
<td>7</td>
</tr>
<tr>
<td>Com. Arith.</td>
<td>0 2 14</td>
<td>16</td>
</tr>
<tr>
<td>Com. Law.</td>
<td>0 1 7</td>
<td>8</td>
</tr>
<tr>
<td>Bus. Eng.</td>
<td>0 7 10</td>
<td>17</td>
</tr>
<tr>
<td>Accts.</td>
<td>0 0 1</td>
<td>1</td>
</tr>
<tr>
<td>Economics</td>
<td>1 0 3</td>
<td>4</td>
</tr>
<tr>
<td>Pen's'h'n.</td>
<td>0 1 2</td>
<td>3</td>
</tr>
<tr>
<td>Spelling</td>
<td>0 0 3</td>
<td>3</td>
</tr>
<tr>
<td>Com. Geo.</td>
<td>0 0 4</td>
<td>4</td>
</tr>
<tr>
<td>Off. Pract.</td>
<td>0 2 1</td>
<td>3</td>
</tr>
<tr>
<td>Salesm's'h'n.</td>
<td>0 0 2</td>
<td>2</td>
</tr>
<tr>
<td>Adv. Typ.</td>
<td>0 3 1</td>
<td>4</td>
</tr>
<tr>
<td>Adv. Sh't'd.</td>
<td>0 1 0</td>
<td>1</td>
</tr>
</tbody>
</table>

The divergence in the length of the courses in weeks was equally conspicuous. Typewriting I was offered for 36 weeks by 33 schools and 18 weeks by 5 schools. Bookkeeping I was offered for 36 weeks.
by 28 schools and 18 weeks by 6 schools. Shorthand was offered for 36 weeks by 28 schools and 18 weeks by 3 schools.

It is very difficult to compare the amount of time spent on a subject in one high school with that of another. The computation that is used in this study eliminates the error due to differences in the number of periods per week and in the length of the course in weeks.

In attempting to determine the amount of time given to the different commercial subjects in the high schools, the number of weeks per year that a subject is taught was multiplied by the number of periods per week. This results in the total number of periods which is allotted to each subject in a year. The number of high schools offering each of the different commercial subjects the various number of periods per year is indicated in table VIII.

From table VIII it can be seen that 360 and 180 periods per year is the most popular length of the commercial courses, if the number of weeks per year that a subject is taught is multiplied by the number of periods per week. It is also discernable that there is considerable disagreement as to how many periods should be allotted to the various commercial courses. The greatest amount of disagreement, according
TABLE VIII.

THE NUMBER OF HIGH SCHOOLS OFFERING EACH OF THE COMMERCIAL SUBJECTS.

<table>
<thead>
<tr>
<th>Name of subject</th>
<th>Number of schools offering subjects offering the various number of periods per year</th>
<th>total number of schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>360 252 270 180 90 72 36</td>
<td></td>
</tr>
<tr>
<td>Typ. I.</td>
<td>19 0 0 17 0 1 1 38</td>
<td></td>
</tr>
<tr>
<td>Typ. II.</td>
<td>11 1 0 13 1 0 0 26</td>
<td></td>
</tr>
<tr>
<td>Adv. Typ.</td>
<td>1 0 0 2 1 0 0 4</td>
<td></td>
</tr>
<tr>
<td>Sh't'd.I.</td>
<td>0 0 0 26 4 0 1 31</td>
<td></td>
</tr>
<tr>
<td>Sh't'd.II.</td>
<td>1 0 0 11 4 0 0 16</td>
<td></td>
</tr>
<tr>
<td>Adv. Sh't'd.</td>
<td>0 0 0 1 0 0 0 1</td>
<td></td>
</tr>
<tr>
<td>Ekon.I.</td>
<td>2 1 0 17 4 0 1 25</td>
<td></td>
</tr>
<tr>
<td>Ekon.II.</td>
<td>1 0 0 2 3 0 1 7</td>
<td></td>
</tr>
<tr>
<td>Acc'ts.</td>
<td>0 0 0 1 0 0 0 1</td>
<td></td>
</tr>
<tr>
<td>C'nr. Law.</td>
<td>0 0 0 1 7 0 0 8</td>
<td></td>
</tr>
<tr>
<td>Econ.</td>
<td>0 0 1 0 3 0 0 4</td>
<td></td>
</tr>
<tr>
<td>Bus. Eng.</td>
<td>0 0 0 8 0 0 0 18</td>
<td></td>
</tr>
<tr>
<td>Com. Arith.</td>
<td>1 0 0 3 7 0 0 16</td>
<td></td>
</tr>
<tr>
<td>Pen'S'h'd.</td>
<td>6 0 0 1 3 0 0 3</td>
<td></td>
</tr>
<tr>
<td>Spelling</td>
<td>0 0 0 10 0 0 3</td>
<td></td>
</tr>
<tr>
<td>Sales'h'd.</td>
<td>0 0 0 12 0 0 2</td>
<td></td>
</tr>
<tr>
<td>Com. Geo.</td>
<td>1 0 0 2 0 0 4</td>
<td></td>
</tr>
<tr>
<td>Off. Pract.</td>
<td>0 0 0 1 3 0 1 3</td>
<td></td>
</tr>
</tbody>
</table>

to Table VIII is in Typewriting I and Typewriting II.

Nineteen of the 38 schools reporting allot 360 periods per year and 17 of the 38 schools allot 180 periods per year to Typewriting I. Eleven of the 26 schools reporting allot 360 periods per year and 13 of the 26 schools allot...
180 periods per year to Typewriting II.

An attempt was made to determine the semester or semesters that the different commercial subjects were offered by requesting those imparting the information to designate what semester each course was offered. Some of the courses are offered the first semester, some the second semester and some both semesters. The semesters in which the high schools offer the different commercial subjects is indicated in Table IX.

According to Table IX, Typewriting I, Typewriting II, Advanced Typewriting, Shorthand I, Shorthand II, Advanced Shorthand, and Bookkeeping I are most frequently offered in both semesters. Typewriting I is offered both semesters by 33 out of the 38 schools reporting. Typewriting II is offered both semesters by 21 out of the 26 schools reporting. Shorthand I is offered both semesters by 23 out of the 31 schools reporting. Bookkeeping I is offered both semesters by 20 out of the 25 schools reporting. The other courses vary considerably in this respect. Business English is offered by 5 schools the first semester, 5 schools the second semester and 8 schools both semesters.

The inquiry blanks used in the study requested those imparting the information to state what textbooks were being used in the different commercial subjects. In Typewriting I 29 of the 36 schools that reported were using the New Rational Typewriting by Rupert and SoRelle. The other textbooks used in Typewriting I were the New
**TABLE IX.**

**THE NUMBER OF HIGH SCHOOLS OFFERING THE DIFFERENT COMMERCIAL SUBJECTS THE FIRST OR SECOND SEMESTER OR BOTH SEMESTERS.**

<table>
<thead>
<tr>
<th>Name of subject</th>
<th>First</th>
<th>Second</th>
<th>Both</th>
<th>Total number of schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typ. I.</td>
<td>5</td>
<td>0</td>
<td>33</td>
<td>38</td>
</tr>
<tr>
<td>Typ. II.</td>
<td>0</td>
<td>5</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>Adv. Typ.</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Adv. Sh't'd.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Prac. I.</td>
<td>4</td>
<td>1</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Prac. II.</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Acct.</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Econ.</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Bus. Eng.</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>Com. Arith.</td>
<td>9</td>
<td>3</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Penn's'h'd.</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Spelling</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Sel'm's'h'd.</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Com. Geo.</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Off. Pract.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Twentieth Century Typewriting Manual and Hammond's Rational Typewriting. In Typewriting II 18 of the 22 schools that reported were using the New Rational Typewriting by Rupert and SoBelle. All of the schools offering Advanced Typewriting were using the New Rational Typewriting by
Rupert and SoRelle.

All of the schools offering Shorthand I, Shorthand II and Advanced Shorthand were using Gregg's Shorthand Manual.

In Bookkeeping I the Twentieth Century Bookkeeping and Accounting by Baker was being used by 23 out of the 33 schools that reported. Elwell and Toner's Bookkeeping and Accounting was used by the other five schools in Bookkeeping I. In Bookkeeping II all of the schools that reported were using the Twentieth Century Bookkeeping and Accounting by Baker.

The textbooks used in the other commercial subjects were not reported.

From the inquiry blanks directed to the teachers of commercial subjects, an attempt was made to determine the number of years of teaching experience of these teachers in only commercial subjects, and in all subjects in the junior and senior high school.

The number of years that commercial teachers have taught commercial subjects in the high school and the total teaching experience in the junior and senior high school is indicated in table X.

The median number of years of teaching experience in commercial subjects for the group presented in table X is 1.4. The median of teaching experience in both the junior and senior high school for the group presented in table X is 4.5 years.
TABLE X.

THE NUMBER OF YEARS THAT COMMERCIAL TEACHERS HAVE TAUGHT COMMERCIAL SUBJECTS IN THE HIGH SCHOOL AND THEIR TOTAL TEACHING EXPERIENCE IN THE JUNIOR AND SENIOR HIGH SCHOOL.

<table>
<thead>
<tr>
<th>School subject</th>
<th>Number of years of experience</th>
<th>over Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>In commercial subjects 0 1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In junior and senior H. S. 0 6 3 2 8 5 1 4 0 6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percentage in commercial 15 25 22 8 0 12 3 5 0 10 100
Percentage in junior and senior H. S. 0 15 20 5 20 13 2 10 0 15 100

One teacher in the group has had 25 years of teaching experience in the junior and senior high school, 12 years of which have been in commercial subjects.

Another teacher has had 13 years of teaching experience all of which has been in commercial subjects.

Twenty-five percent of the teachers of commercial subjects have one year of teaching experience in commercial subjects. Twenty-two percent of the teachers of commercial subjects have two years of teaching experience in the commercial subjects. Fifteen percent of the teachers of commercial subjects have no experience in teaching commercial subjects.

Twenty percent of the commercial teachers have taught two years in the junior and senior high school.
Twenty percent of the commercial teachers have taught 4 years in the junior and senior high school. Fifteen
percent have taught only one year in the junior and senior high school.

In the inquiry blanks the teachers were requested to give the number of semesters of training in college, the number of semesters of training in a university and the number of weeks of training in business college. The fact that part of the information is given in terms of semesters and part in terms of weeks makes it difficult to compare the total training of the commercial teachers. An attempt has been made to make the results of these answers comparable and to put them in a form so that they may be easily presented.

In order to accomplish this, the semesters of college or university training have been transformed into weeks of training so that they may be compared with the business college training which was given in terms of weeks. In this study a semester is considered to be the equivalent of 18 weeks of training. By multiplying the number of semesters of college or university training by 18 the total number of weeks of training was secured. In case the teacher has had both college or university training and business college training, the number of semesters of college or university training was multiplied by 18 to determine the number of weeks of college or university training, and this was added to the number of weeks of business college training, the result being a composite of all the teacher's training.
in terms of weeks.

The number of weeks of training of the commercial teachers in the high schools and the percentage having various weeks of training is presented in table XI.

**TABLE XI.**

<table>
<thead>
<tr>
<th>Number</th>
<th>The number of weeks of training,</th>
<th>percent</th>
<th>70-90</th>
<th>110-130</th>
<th>150-170</th>
<th>190-210</th>
<th>230-250</th>
<th>250-269</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>12</td>
<td>10</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Percent</td>
<td>5</td>
<td>8</td>
<td>5</td>
<td>30</td>
<td>25</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

It may be observed in table XI that 12 out of the 40 commercial teachers reporting have from 130-149 weeks of training, and 10 out of the 40 teachers reporting have from 150-169 weeks of training. Two teachers have from 70-89 weeks of training and one has from 250-269 weeks of training. The median number of weeks of training of the 40 commercial teachers reporting is 152.

Thirty percent of the 40 commercial teachers reporting have from 130-149 weeks of training, five percent have from 70-89 weeks of training and 2.5 percent have from 250-269 weeks of training.

All the teachers were asked to specify the specific field of their major subject and minor subject in their college work. In this way it is possible to determine how many of the teachers have special training for the teaching of commercial subjects.
The extent that commercial teachers have studied business or commerce as a major or minor subject in their college work is indicated in table XII.

Fifteen of the 40 commercial teachers reporting do not have a minor or major in a business or commerce course in their college work, seven of which have had from 6 to 36 weeks of business college training and the remaining eight have no business or commerce training whatever.

Twenty-five of the 40 commercial teachers reporting have either a major or minor in business or commerce in their college work. Seventeen or 42.5 percent of the teachers report a major in business administration. Eight or 20 percent of the teachers report a minor in history and social science.

In endeavoring to determine the kind of degrees held by the teachers of commercial subjects, each teacher was asked to state what degree they held. The degrees held by commercial teachers as well as the percent holding each degree are given in table XIII.

The kind of degrees held by commercial teachers vary considerably and a large percentage of the degrees are not degrees in commerce or business.

Thirteen of the 40 commercial teachers reporting have a Bachelor of Arts degree, 13 have a Bachelor of Science degree and 9 do not have a degree. Thirty-two percent of the teachers reporting have a Bachelor of
TABLE XII.

THE MAJOR AND MINOR SUBJECTS TAKEN IN COLLEGE BY COMMERCIAL TEACHERS.

<table>
<thead>
<tr>
<th>Major subject.</th>
<th>Minor subject.</th>
<th>Total</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus. Adm.</td>
<td>2 2 2 3 0 3 1 0 0 4 0</td>
<td>17</td>
<td>42.5</td>
</tr>
<tr>
<td>For. Land.</td>
<td>1 1 1 1 0 0 1 0 0 0 0</td>
<td>5</td>
<td>10.0</td>
</tr>
<tr>
<td>Educ.</td>
<td>1 0 1 0 1 0 1 1 1 0 1</td>
<td>7</td>
<td>17.5</td>
</tr>
<tr>
<td>History</td>
<td>0 1 1 0 0 0 0 0 0 0 0</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>Phy. Educ.</td>
<td>0 0 0 0 1 0 0 0 0 0 0</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Econ.</td>
<td>1 0 0 0 0 0 0 0 0 0 0</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Math.</td>
<td>0 0 0 1 0 1 0 0 0 0 0</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>Home Econ.</td>
<td>1 0 0 0 0 0 0 0 0 0 0</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td>6 5 5 8 2 4 3 1 1 4 1</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td>15 12 12 20 5 10 7 2 2 10 2</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Eng.</td>
<td>0 1 0 3 0 0 0 0 0 0 0</td>
<td>4</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Arts degree, 32.5 percent have a Bachelor of Science degree, and 22.5 percent do not have a degree.

It is desirable to know what the attitude of commercial teachers is toward development and betterment by means of increased training. The commercial teachers reporting were requested to indicate how many semester hours of graduate credit they had above a Bachelor of Arts or Bachelor of Science degree. The number and percentage of semester hours credit above a Bachelor of Arts or Bachelor of Science degree is indicated
TABLE XIII.

THE NUMBER AND PERCENTAGE OF COMMERCIAL TEACHERS HOLDING EACH OF THE VARIOUS DEGREES.

<table>
<thead>
<tr>
<th>Kind of degree</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>9</td>
<td>22.5</td>
</tr>
<tr>
<td>B. A.</td>
<td>13</td>
<td>32.5</td>
</tr>
<tr>
<td>B. S.</td>
<td>13</td>
<td>32.5</td>
</tr>
<tr>
<td>B. of Ped.</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>M. S.</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Associate Arts</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>B. S. C.</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100.0</td>
</tr>
</tbody>
</table>

According to table XIV, 29 or 72.5 percent of the teachers reporting have no semester hours credit above a Bachelor of Arts or Bachelor of Science degree. Four or 10 percent of the teachers reporting have from 20-29 semester hours credit above a Bachelor of Arts or Bachelor of Science degree.

In endeavoring to determine the number of semester hours of education of the commercial teachers, those reporting the information were requested to state how many semester hours of education (strictly professional courses) they had not including general psychology. The number of semester hours of education which teachers of commercial subjects have is presented in table XV.
TABLE XIV.

THE NUMBER AND PERCENTAGE OF SEMESTER HOURS CREDIT WHICH THE TEACHERS HAVE ABOVE A BACHELOR OF ARTS OR BACHELOR OF SCIENCE DEGREE.

<table>
<thead>
<tr>
<th>Number</th>
<th>Number of semester hours credit.</th>
<th>Total.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>9</td>
</tr>
</tbody>
</table>

Table XIV shows that 14 or 35 percent of the 40 commercial teachers reporting have from 10-19 semester hours credit in education, 13 or 32.5 percent have from 20-29 semester hours credit in education and two teachers have no credit in education.

TABLE XV.

THE NUMBER OF SEMESTER HOURS OF EDUCATION OF TEACHERS OF COMMERCIAL EDUCATION.

<table>
<thead>
<tr>
<th>Number of semester hours.</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>1-9</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>10-19</td>
<td>14</td>
<td>35.0</td>
</tr>
<tr>
<td>20-29</td>
<td>13</td>
<td>32.5</td>
</tr>
<tr>
<td>30-39</td>
<td>6</td>
<td>15.0</td>
</tr>
<tr>
<td>40-49</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Over 50</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The salaries which any class of teachers receive is often a good index of the quality of instruction given by those teachers. In this study,
the teachers were asked to state the amount of their present salary per year. The number and percentage of teachers receiving the various salaries per year is presented in table XVI.

TABLE XVI.
THE SALARY PER YEAR OF TEACHERS OF COMMERCIAL SUBJECTS IN HIGH SCHOOL.

<table>
<thead>
<tr>
<th>Salary per year</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1000-1199</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>1200-1299</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>1300-1399</td>
<td>12</td>
<td>30.0</td>
</tr>
<tr>
<td>1400-1499</td>
<td>8</td>
<td>20.0</td>
</tr>
<tr>
<td>1500-1599</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>1600-1699</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td>1700-1799</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>1800-1899</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>1900-1999</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Over 1999</td>
<td>4</td>
<td>10.0</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The median salary per year of the 40 commercial teachers reporting in this study was $1437.50. Twelve or 30 percent of the 40 teachers that reported were receiving a salary from $1300 to $1399, eight or twenty percent were receiving a salary from $1400 to $1499, three or 7.5 percent were receiving a salary from
$1100 to $1199, and four or 10 percent were receiving a salary over $2000.
CHAPTER V.

Summary and Conclusions.

1. Information for this study was solicited by means of an inquiry blank from the 55 senior high schools in New Mexico.

2. Information regarding commercial education was secured from 44 senior high schools in New Mexico by means of an inquiry blank. Five of the schools reporting stated that they were offering no commercial work.

3. Returns were received from 80 percent of the senior high schools in New Mexico.

4. In the 39 high schools reporting 40 commercial teachers were employed.

5. The total enrollment of the 39 schools reporting was 5,412. The median enrollment per school of all the high schools reporting was 98.

6. The total enrollment in commercial subjects of the 39 schools reporting was 1,549. The median enrollment in commercial subjects per school of all the high schools reporting was 37.

7. The total enrollment in commercial subjects of the 39 high schools reporting was 29 percent of the total enrollment in the high schools.

8. Twenty-three percent of the 39 schools reporting
have no teachers teaching only commercial subjects.
9. Seventy-four percent of the schools reporting have one teacher teaching only commercial subjects.
10. Forty-one percent of the schools reporting have no teachers teaching academic subject in addition to commercial subjects.
11. Thirty-six percent of the schools reporting have one teacher teaching academic subjects in addition to commercial subjects.
12. There is considerable disagreement in the kind of commercial subjects offered by the different high schools reporting.
13. Typewriting I, Bookkeeping I and Shorthand I are the subjects offered most frequently in the high schools reporting.
14. There is considerable difference in the length of the commercial courses in weeks in the different high schools reporting.
15. There is considerable difference in the number of periods per week allotted to each commercial subject in the different high schools reporting.
16. The most popular length of the commercial courses in the high schools reporting is 180 and 360 periods per year.
17. It is apparent that there is little agreement regarding the semester in which a course or subject is offered.
18. The median number of years of teaching experience in commercial subjects of the 40 commercial teachers reporting is 1.4 years.

19. The median number of years of teaching experience of the 40 commercial teachers reporting in both the junior and senior high school is 4.5 years.

20. The median number of weeks of training of the 40 commercial teachers reporting, in a college, in a business college or university is 152.

21. Thirty-seven percent of the 40 commercial teachers reporting do not have a minor or major in a business or commerce course in their college work. Seventeen percent of these have from 6 to 36 weeks of business college training and the remaining 20 percent have no business or commerce training.

22. Sixty-three percent of the commercial teachers reporting have either a major or a minor in business or commerce in their college work.

23. Twenty-two percent of the 40 commercial teachers reporting do not have a degree.

24. Seventy-two percent of the 40 commercial teachers reporting have no semester hours credit above a Bachelor of Arts or Bachelor of Science degree.

25. The median number of semester hours of education of the 40 commercial teachers reporting is 24.

26. The median salary per year of the 40 commercial teachers reporting in this study was $1437.50.
BIBLIOGRAPHY.


Herrick, C. A. -


Lyon, Leverett S. -


New Mexico Educational Directory 1927-1928.
State Department of Education, Santa Fe, New Mexico.


Statistical Abstract of the United States. 1928. pp. 49. Table No.43.

Tarr, A. R. - Commercial Courses in High School.


Walters, R. G. -

INQUIRY BLANK DIRECTED TO THE HEAD OF THE COMMERCIAL DEPARTMENT:

Name of high school ____________________ Total senior high school enrollment ______ Number of senior high school students enrolled in commercial subjects ______ How many senior high school teachers teaching nothing but commercial subjects ________.

How many senior high school teachers teaching academic subjects in addition to commercial subjects __________.

Is there a course in your senior high school designed especially for students who are planning to go into business, but do not want to do office work ________.

Please answer the following questions concerning the commercial subjects which you are offering this year. Add other commercial subjects unmentioned.

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Length of course in weeks</th>
<th>Periods per week</th>
<th>Offered 1st. 2nd. Sem. Sem.</th>
<th>Textbook used.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typ. I.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typ. II.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adv. Typ.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sh't'd. I.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sh't'd. II.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adv. Shd.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bkpg. I.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bkpg. II.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acctg. I.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Com. Law.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Econ.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus. Eng.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Com. Arith.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pen'ship.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spell.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sal'ship.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Com. Geo.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office Pr.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signed ____________________
INQUIRY BLANK DIRECTED TO THE HEAD OF THE COMMERCIAL DEPARTMENT.

Name of high school

Your teaching experience:

Please indicate how many years (including this year you have taught only commercial subjects)

How many years have you taught in the junior and senior high school (including this year)

Years of schooling which you have had above the high school:

Number of semesters in college

Number of semesters in a university

What was your major subject

What was your first minor subject

Number of weeks of training in business college

What academic degrees do you have

How many semester hours (18 weeks or its equivalent) of graduate credit (above an A.B. or B.S. degree) do you have

How many hours of education (strictly professional courses) do you have not including general psychology

What is your present salary per year

Signed
INQUIRY BLANK DIRECTED TO THE TEACHERS OF COMMERCIAL SUBJECTS.

Name of high school__________________________________________________________

Your teaching experience:

Please indicate how many years (including this year) you have taught only commercial subjects__________________________________________________________

How many years have you taught in the junior and senior high school (including this year)__________________________________________________________

Years of schooling which you have had above the high school:

Number of semesters in college___________ Number of semesters in a university___________

What was your major subject____________________________________________________

What was your first minor subject_______________________________________________

Number of weeks of training in business college________________________________

What academic degrees do you have______________________________________________

How many semester hours (18 weeks or its equivalent) of graduate credit (above an A.B. or B.S. degree) do you have______________________________

How many hours of education (strictly professional courses) do you have not including general psychology_________________________________________

What is your present salary per year____________________________________________

Signed________________________________________
To the Head of the Commercial Department.

My Dear Sir:

I am making an effort to ascertain the present practices of the high schools of New Mexico in training high school students for commercial work. In order to obtain the data required for this survey, inquiry blanks are being sent to all the high schools in New Mexico.

We, as commercial teachers, should attempt to find out common practices in order to develop the best possible commercial courses. Although common practices are not always the most desirable, they do give us the opinions of those who have studied and are interested in this phase of high school training.

You, no doubt, have at some time been confronted with questions such as: what commercial subjects should be taught in high school; how much time should be allowed to each; what textbook should be used; what should be the qualifications of commercial teachers. The results of this survey should help us to answer some of these pertinent questions in terms of existing practices.

The data collected will be compiled and made available to those interested in commercial work. In order that this information may be secured, I am asking your cooperation in getting the facts asked for on the enclosed inquiry blank.

Please fill out as fully as possible the inquiry blank directed to the head of the commercial department; also hand to each teacher in your department an inquiry blank directed to commercial teachers. The information disclosed will be considered confidential and will not be used in making objectable comparisons between teachers and schools.

I shall appreciate it if you will mail this information to me promptly, in the enclosed stamped self-addressed envelope.

Respectfully yours,
Magdalena, New Mexico,  
April 10, 1929

Head of the Commercial Department,  

My Dear Sir:  

Sometime ago I mailed some inquiry blanks to you, soliciting information regarding commercial work in your high school. Forty out of the fifty-five high schools in New Mexico have replied, giving the information asked for. Should you desire that your high school be included in this survey, please fill out the inclosed inquiry blank.

It is necessary, in order that this survey be representative and of the greatest value to us, as teachers of commercial subjects, to get information from as large a number of high schools in New Mexico as is possible, and I assure you that your cooperation in this respect will be greatly appreciated.

Respectfully yours,
List of Schools to Which Inquiry Blanks were Sent.

1. Alamogordo.
2. Albuquerque.
3. Artesia.
4. Aztec.
5. Bolen.
6. Carlsbad.
7. Carrizozo.
8. Cimarron.
10. Clovis.
11. Columbus.*
12. Dawson.
14. Des Moines.*
15. Dexter.
16. East Las Vegas.*
17. Espanola.*
18. Estancia.
20. Fort Sumner.
21. Gallup.*
22. Grenville.
23. Hagerman.

* Schools not reporting.
24. Hope.
25. Hot Springs.
27. La Joya.
29. Las Cruces.
30. Las Cruces Union High School.*
31. Las Vegas.*
32. Lordsburg.
33. Lovington.
34. Magdalena.
35. Maxwell.
36. Melrose.*
37. Mills.
38. Mosquero.
40. Portales.
41. Raton.
42. Roswell.
43. Santa Fe.
44. Santa Rita.
45. Silver City.
46. Socorro.*
47. Springer.
48. Texico.

* Schools not reporting.
49. Tucumcari.*
50. Tularosa.
51. Vaughn.
52. Wagon Mound.
53. Willard.
54. Roy.
55. Elida.

* Schools not reporting.