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THE RELATION OF PAST AND PRESENT DIETS TO
THE PHYSICAL CONDITION OF A GROUP OF AGED PEOPLE

by

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Approved by:

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CHAPTER I

INTRODUCTION

In the past, we have neglected the aged group, but today we are giving more attention to this group for at least two reasons. One, we are faced with the problem of securing older men to replace the selectees on the farm, in the office, and in industry. Second, due to the increased life expectancy, we have a larger proportion of aged people in our midst than ever before. There are over 13,000,000 people past sixty in the United States. Thewlis as well as other physicians specializing in geriatrics believes that many of these could be physically rehabilitated and made effective again.¹

The idea of living to a very advanced age has always been fascinating to mankind. Years ago people had superstitious beliefs concerning old age and the renewal of youth. They believed in fountains of youth and other magical means of defeating age.

Doctor Oliver Wendell Holmes gave this advice to people who wanted to live a long time, "Sometime before birth, advertise for a couple of parents belonging to long lived families."² Modern research, however, is furnishing more practical rules by demonstrating that life

¹ Malford W. Thewlis, "Geriatrics and War", Southern Medical and Surgical Journal, CIV (1942), 384.

² J. D. Ratcliff, "Let's Live a Little Longer", Collier's, March 13, 1943, 11.

can be prolonged.

The average length of life has been extended from 34.0 years in 1879-1889 to 63.4 years in 1941,³ and there is every indication that it will be further prolonged. But long life is not enough if symptoms of senility appear in later life. We have a responsibility to keep old people in a state of maximum good health and productivity.

Korenchevsky states:

"The physiology and pathology of aging becomes a war problem, and for medicine it is especially important to decide whether there are available or can be found any practical means of helping the older man to keep fit both physically and mentally so as to perform his work in the best possible way."⁴

Korenchevsky is of the opinion that vitamin therapy is effective in increasing the working capacity of the aged.⁵

McCay has said that "by considering the diet during the whole of life, we may modify the conditions which terminate life".⁶

³ "Longevity Almost Doubled in Six Decades", Statistical Bulletin, Metropolitan Life Insurance Company, XXIII (May, 1942), 1.

⁴ V. Korenchevsky, "The War and the Problem of Aging", The Journal of the American Medical Association, CXIX (June 20, 1942), 625.

⁵ Ibid., p. 629.

⁶ C. M. McCay, "Diet and Aging", Journal of the American Dietetic Association, XVII (1941), 540.

We know little of the factors making the difference in humans in length of life and in health in old age. Some are as young at sixty as others are at thirty. Hence we ask many questions. What are the factors which determine one's state of health in old age and the length of one's life? Is diet one of the determining factors? To what extent do one's past dietary habits influence one's health in old age?

No extensive study of past dietary habits in relation to the health of old people has been attempted. The difficulties in making such a study are at once apparent. They include:

1. Inability of people to remember specific foods eaten.
2. Variation in dietary habits at different times.
3. Lack of available records on past physical condition of the subjects studied.
4. Influence of factors other than diet.

The present study was planned to explore the possibilities in this field. Could any definite and reliable information be obtained on past dietary habits and could a relation of past diet to present physical condition be established? At the same time, the present diet could be observed and evaluated.

This study was made at the Masonic and Eastern Star Home and at the County Home in Greensboro, North Carolina in the spring of 1944.

The fifty studied were selected at random and included

29 women and 21 men between the ages of 60 and 100. The two groups represented two economic levels. One was composed in the main of men and women of a moderate income level who had more education than the second group. The people in this group tended to have spent more money for food and to have had better diets. The other group consisted of those from a low income group who had come to the home through the County Welfare Department.

The questionnaire and interview methods were used to ascertain information on past dietary habits. Each person was interviewed twice at which time an observation chart on the present physical condition was filled in along with the foods forms. Information on present dietary habits was also obtained.

CHAPTER II

REVIEW OF THE LITERATURE

In reviewing the literature, a summary is given first of studies bearing on the relation of diet to longevity and health in old age. The second part of the review is devoted to recommendations of nutritionists concerning diet for the aged and the modification necessary.

Many studies have dealt with the diets of children and young adults, but not until recent years has there been much interest in the diet of older persons. Today the newer knowledge of nutrition is contributing a great deal to the improvement of normal health both of children and adults, and to the extension of the life expectation of adults.¹

Although the data on the basis of longevity in human beings are not extensive, we can find much evidence from animal studies. Sherman states that:

"Full-life experiments with laboratory animals seem to afford the best indications yet available as to the long-time probabilities of people living under everyday conditions".²

¹ Henry C. Sherman, "The Bearing of the Results of Recent Studies in Nutrition on Health and on Length of Life", Bulletin of the New York Academy of Medicine, XIII (June, 1937), 311.

² Henry C. Sherman, Chemistry of Food and Nutrition (New York: The MacMillan Company, 1941), p. 422.

The rat is used for most experimental work because its short natural life cycle will permit full-life-cycle experiments, and its food habits and nutritional processes are much like our own. Thus we can study the influence of food upon health and length of life of the rat and apply it to the human.³ Ten days in the life of a rat is approximately equivalent to a year in human life.

Sherman made a study at Columbia University to determine whether it is possible by the improvement of diet to induce a definite increase in longevity. Parallel lots of rats of the same heredity were fed diets A and B consisting of dried whole milk, ground whole wheat, table salt, and distilled water. Diet B contained one-sixth more milk than Diet A.

Thus Sherman found that an already adequate diet, A, which would support normal growth and reproduction and which would maintain health and moderate length of life was still capable of significant improvement in its effect on nutritional well being and longevity.⁴ The milk-enriched Diet, B, made an improvement in growth and development and maintained a higher level of vitality. The average length of life of the adult was extended on Diet B, and the period of

³ Sherman, Bulletin of the New York Academy of Medicine, pp. 313-314.

⁴ Henry C. Sherman and H. L. Campbell, "Further Experiments on the Influence of Food Upon Longevity", Journal of Nutrition, 11 (1930), 417.

senility was deferred and shortened. This increase in the average length of life of the adult rat would correspond to an increase in human adult life of from 70 years to 77.⁵

The experiments of McCay and his associates at Cornell University are of interest in the study of longevity. In 1930, he fed one group of rats as much as they desired of an adequate diet. The other group was given a diet completely adequate for normal growth but restricted in calories.

The rats on the retarded diet were still full of vigor at the end of 900 days which is equivalent to 90 years in humans; but there were only a few survivors in the group that ate all they desired. There was a marked difference in the degree of senility of the two groups.⁶

McCay then fed the retarded group all the food they wanted. In the course of a few weeks they were within 10 per cent of their normal weight. These animals retained the power to resume growth long after their expected life-span.⁷

Another study was made by McCay and his associates to determine the effect on rats of different diets introduced during middle age. Some grew fat, others were kept thin.

⁵ Henry C. Sherman, "Nutritional Improvement in Health and Longevity", Scientific Monthly, XLIII (August, 1936), 100.

⁶ Clive Maine McCay, "Diet and Aging", Journal of the American Dietetic Association, XVII (1941), 541.

⁷ Ibid., p. 543.

One group ate all they wanted until middle age, then were put on a restricted diet. These lived 10 per cent longer than animals allowed a free choice of food. This experiment showed clearly that rats kept underweight by restriction of calories outlive those allowed all they desire.⁸

These studies indicate that the degree of body fatness is a most important factor in longevity. Exercise and protein level are of minor importance compared to body fatness.⁹

But it must be remembered that McCay's diets were restricted only in calories and that they were adequate in minerals, vitamins, and normal protein.

Morgan fed crystalline thiamin, riboflavin, pyridoxine, and niacin with the necessary fat soluble vitamins and a purified basal diet to young rats. After six to eight weeks, their fur became silvery, growth was impeded, and they died in six to eight months. The animals appeared very aged, had wrinkled skin, thin gray hair, and skin eruptions. When concentrated extracts of the "filtrate factor" (a less well known vitamin), were given at any stage of the deficiency, their condition improved at once.¹⁰ This experiment is of

⁸ Clive Maine McCay, and others, "Nutritional Requirements During the Latter Half of Life", Journal of Nutrition, XXI (1941), 59.

⁹ McCay, op. cit., p. 544.

¹⁰ Agnes Fay Morgan, "Vitamins and Senescence", Scientific Monthly, LII (May, 1941), 417.

interest to humans because of the effect that vitamins may have on the prevention of aging.¹¹

Sir Robert McCarrison had a very healthy rat colony in India. The stock rats were fed a diet similar to that eaten by the finest and strongest people of Northern India. It consisted of whole wheat bread, butter, legumes, fresh raw carrots, and cabbage, unboiled whole milk, a small amount of raw meat with bones once a week, and an abundance of water.

During the two and one-half years of the experiment, there were no illnesses among the rats, no deaths from natural causes, and no infant mortality. Both clinically and at post-mortem examinations the stock were found to be "remarkably free from disease".

Another group of rats was kept under the same conditions but was fed the diet of people in India among whom disease was very prevalent. This diet consisted of milled cereal grains, vegetable fats, little or no milk and butter, and very limited amounts of fresh vegetables. When these rats were examined, many lesions and diseases were found.¹²

Longevity has always been a subject of interest to mankind. Some students of longevity in earlier times surmised a relation of diet to long life. Herodius (5th Century B.C.)

¹¹ Ibid., p. 421.

¹² V. G. Heiser, "Influence of Nutrition on Disease of Middle and Old Age", Scientific Monthly, XLIX (October, 1939) 307.

referred to the presence of longevity among a milk-eating
¹³
 people.

Roger Bacon in the 13th Century was interested in the use of the experimental method as a means of determining the factors involved in checking the advances of old age upon the human body. He believed that the processes of
¹⁴
 aging could be modified by diet.

Francis Bacon stated:

"It seems to be approved by experience, that a spare diet, and almost a pythagorical, -- such as is either prescribed by the strict rules of a monastical life, or practiced by hermits, which have necessity and poverty for their rule, -- rendereth a man long-lived."¹⁵

Within recent years the research study of longevity in regard to diet has been increased.

The Metropolitan Life Insurance Company reports that 13.50 years have been added to the average length of life of the American population since the century began. The life expectation at birth in 1901 was 49.24 years, but in 1938, it had increased to 62.78 years. The life expectation of white females increased 15.12 years and males 13.89 years.

¹³ L. J. Brunie, "Geriatrics - Contribution of Twenty-five Carefully Studied Patients Beyond Eighty Years", California and Western Medical Journal, XLIX (1938), 371.

¹⁴ Clive Maine McCay, "Seven Centuries of Scientific Nutrition", Journal of the American Dietetic Association, XV, (October, 1939), 649.

¹⁵ E. V. Cowdry, Problems of Aging, (Baltimore; The Williams and Wilkins Company, 1942), p. 691.

The average length of life for the general population today¹⁶ is still capable of a substantial increase.

Statistics from 1940 show the average length of life irrespective of sex to be 63.77 years. The average length of life for females was higher (67.31 years) than for¹⁷ males (62.94 years), a difference of 4.33 years or less. Records show a continued increase in the average length of¹⁸ life.

It is recommended that the average weight at thirty years of age be maintained in later years. "Mortality rates of insurance companies offer conclusive proof of¹⁹ the relationship of age and body weight to longevity."

Dublin and Lotka state in describing the Medical Impairment Study that:

"Persons of younger ages who are underweight or markedly overweight suffer from high mortality, while at the older ages some degree of underweight is an asset, and mortality increases with increase in weight beyond the optimum."²⁰

Brunie studied thirteen men and twelve women who were

¹⁶ "Longevity of the American People at a New Record", Statistical Bulletin, Metropolitan Life Insurance Company, XXI (May, 1940), 2-3.

¹⁷ "American Longevity Approaches Three Score and Ten", Statistical Bulletin, Metropolitan Life Insurance Company, XXII (December, 1941), 6.

¹⁸ Ibid., p. 7.

¹⁹ Margaret S. Chaney and Margaret Ahlborn, Nutrition (Cambridge, Massachusetts: Houghton Mifflin Company, 1943), p. 6.

²⁰ Louis I. Dublin and Alfred J. Lotka, Length of Life (New York: The Ronald Press Company, 1936) p. 201.

beyond eighty years of age. In each case, careful medical, dietary, and social histories were collected. In addition each was given a physical examination including urinalysis, blood count, electrocardiographic record, and fluoroscopic examination of the chest. Apparently the diets of these twenty-five old people were adequate. None of the men had been overweight at any time in their life, and only 20 per cent of the women had. They were active and in good health.²¹

The most extensive study of old people was made in Japan by Naka Yama and included 10,000 people past eighty years. He observed that urban life cut down life expectancy, and that women were longer lived than men. The middle class tended to live longer than the lower and upper classes.²²

Fitts' study of food habits included one hundred aged people from 80-100 years of age. Information was obtained concerning their general nutrition, intake of carbohydrate and protein, the adequacy of minerals and vitamins, and the general food habits of the group. He concluded that:

1. They were free of food fads.
2. The diet was representative of the modern day diet.

²¹ L. J. Brunie, "Geriatrics - Contributions of Twenty-five Carefully Studied Patients Beyond Eighty Years", California and Western Medical Journal, XLIX (1938), 369.

²² Ibid., p. 372.

3. The diet contained adequate amounts of protein, carbohydrate, and fat.

4. The diet was better in calcium and phosphorus than the diet for the middle age group because the old people drank more milk.

5. The group averaged 135 pounds in weight.

6. This group retained more of their original teeth than a similar number of middle aged people.²³

Fitts is of the opinion that "The real secret of the old age of this group lies in the quality of their foods in the first five decades of their lives."²⁴ There was no white flour, white sugar, white rice, or canned goods when these people were growing up. They ate coarsely ground grains and lean meats.

Benedict and Root studied a 91-year-old man who had been rejected at the age of 20 years by the army because of insufficient chest expansion. He was well preserved, active, and had an even disposition. He had always maintained the correct weight, had a good appetite and ate a mixed diet, but did not drink milk nor eat many eggs, used no alcohol nor tobacco. He showed good bone calcification and had 17 of his original teeth. The authors conjectured

²³ J. B. Fitts, "Nutrition and Longevity; Study of Diets of 100 Octogenarians", Medical Times, LXIX (November, 1941), 460.

²⁴ Ibid., p. 461.

about the possibility of the low-cholesterol content of
the diet being a factor in longevity.²⁵

Langstroth made a study to determine whether a relationship could be established between certain degenerative diseases and the type of food previously eaten by the patient. The 501 dietary histories included statements as to the amount and kind of food eaten at each meal. Bread, meat, sweet desserts, cream, sugar, butter, and mayonnaise formed the bulk of the diet. The non-protective foods formed 88 per cent of the diet, the protective only 12 per cent.²⁶

A diet containing a proportion of 70 per cent protective food was prescribed in 44 cases of chronic circulatory disease, 25 cases of chronic arthritis, 52 of chronic gastrointestinal disease and 10 of migraine. 73 per cent of these cases were improved or completely relieved. A general tissue improvement throughout the body seemed to be indicated by changes in body weight, skin, and subcutaneous tissue.²⁷

²⁵ F. G. Benedict and H. F. Root, "The Physiology of Extreme Old Age", North Eastern Medical Journal, CCXI, (1936), 521-536.

²⁶ L. Langstroth, "Relation of American Dietary to Degenerative Disease", The Journal of the American Medical Association, XCIII (November, 1929), 1608.

²⁷ Ibid., p. 1612.

Langstroth concluded that a diet high in non-protective foods is conducive to early degenerative disease. By feeding a diet high in protective foods, the progress of degenerative diseases can be checked.²⁸

McCollum believes that a diet with a larger proportion of the needed calories in the form of "protective foods" produces greater development in children and increases the number of years of "positive" or "buoyant" health in adults. The onset of senility and degenerative diseases is delayed when protective foods form a prominent part of the day's diet.²⁹

A study was made by Rose in six institutions where the guests ranged in age from 65-90 years. The purpose of this study was to determine whether aged people could use bananas as a food. Fresh bananas were consumed daily for 16-30 days by 117 people. All the homes had medical supervision, and all except one, had resident nursing service. The added bananas definitely increased the vitamin C content of the diet of these old people. This study indicates that fresh ripe bananas are well liked and are digested without difficulty by people beyond 65 years of age.³⁰

²⁸ Ibid., p. 1613.

²⁹ Sherman, Scientific Monthly, p. 101.

³⁰ Mary Swartz Rose, "Banana as Food for the Aged", Journal of the American Dietetic Association, XVI (March, 1940), 213.

From the review of studies on the aged, it is apparent that the life span can be and is being extended. But our goal must be more ambitious; as Dr. Piersol has said it should be "to add more life to the years rather than more years to life".³¹

Sherman quotes President Woodward as saying that the professional man spends about one third of his life in school, another third in proving to himself and to others what he can do and it is not until he is about fifty that he is given an opportunity to render his fullest services to the world. A charting of age incidence of major opportunities bears this out showing that men around fifty years of age have the largest number of opportunities.³²

What we are looking for is not merely an extension of life but the promotion of optimum efficiency in old age. Tuohy maintains that no one can expect to obtain maximum efficiency and enjoyment from the later years if he has not made any preparation in the adjustment of his habits. The cultivation of good food habits in early life is very important in this connection. "We must learn to grow old skillfully as well as gracefully."³³

³¹ E. V. Cowdry, "New Public Health", Scientific Monthly, LV (October, 1942), 356.

³² Sherman, Scientific Monthly, p. 106.

³³ Edward L. Tuohy, "Feeding the Aged", The Journal of American Medical Association, CXXI (January 2, 1943), 43.

Although in the past few decades we have gained fairly detailed knowledge concerning the dietary requirements of children, and those in early and middle life, we have very little information on the dietary needs of the older man and woman. Several medical and dietetic authorities have given opinions and recommendations regarding a desirable diet for the aged. These are discussed below.

Carlson in his article on the "Older Worker" says that we do not know "the optimum diet for optimum efficiency for any age"; but we do know that the older worker will keep better fit if he eats a diet adequate in protective foods, and avoids overweight or underweight. Both of these conditions shorten the life span and impair one's physical
³⁴
 endurance and performance.

In giving dietary advice to the older worker, Tuohy suggests that he eat a good breakfast including a substantial protein dish and other foods depending on body weight and activity. The carbohydrate in the diet is best in the form of whole grain cereals. He recommends many vegetables and fruits, a small amount of fat, and moderate use of tea, coffee, and condiments which serve as useful stimulants. Food and water taken at regular intervals revive the old person. Fruit juices are highly recommended to improve the
³⁵
 vitamin content of the diet.

³⁴ A. J. Carlson, "Older Worker", The Journal of the American Medical Association, CXXI (1943), 808.

³⁵ Tuohy, "Feeding the Aged", p. 48.

Tuohy emphasizes "freer diets and less fear of food with older people", but at the same time overindulgence must be avoided. Many are undernourished because they limit themselves unnecessarily due to faulty advice and inherent fear. The senescent group especially needs vitamins C, B₁,
 36
 B₂, and other members of the B complex.

According to Rose, the diets for the aged should be more like those for the young in their protective food content. Old people require a higher proportion of protective foods than was formerly thought necessary. A diet richer in minerals and vitamins enables them to eat a wider range of foods with comfort and profit. Many of the minor digestive disorders are eliminated often by a liberal intake of thiamin, and "the characteristics of youth" are better retained when large amounts of vitamins A, B₂, and C are
 37
 present in the diet.

Dorothy Duckles states that "premature senility can be at least partially avoided if care is given to the diet
 38
 of those approaching senescence."

³⁶ Edward L. Tuohy, "Geriatrics in Relation to An Adequate Energy Producing and Protective Diet", The Journal of the American Medical Association, CXIV (1940), 227.

³⁷ Mary Swartz Rose and E. W. Gardner, "The Banana as Food for the Aged", Journal of the American Dietetic Association, XVI (March, 1940), 208.

³⁸ Dorothy Duckles, "Nutrition in Geriatrics", Journal of the American Dietetic Association, XVIII (1942), 508.

More emphasis should be placed on better nutrition at all ages with special attention given to the protective foods.³⁹

Duckles lists some of the common pitfalls and complaints of the aged which we need to keep in mind in checking dietary histories. They include poor appetite, digestive disturbances, and chronic constipation. These are often brought about by faulty dietary habits such as eating sweets in the mid-morning, having afternoon tea, irregular meals, lack of thiamin, inadequate fluid intake and too few vegetables and fruits. Other factors included in causing trouble are irregular hours, poor mastication, and psychogenic factors as emotional stress, nervous instability, fear, and worry.⁴⁰

According to Sadow "Moderation is the keynote of dieting in old age". There is no specific diet for the aged except that it should be a simple, well balanced diet emphasizing the protective foods, and one that is prepared in a way to preserve the full nutritive values of the foods.⁴¹ Regularity of feeding is important.

³⁹ Ibid., p. 510.

⁴⁰ Ibid., p. 509.

⁴¹ Sue E. Sadow, "Recent Trends in Feeding Elderly People", Medical Womans' Journal, (April, 1943), 98.

Cowdry is another authority who emphasizes moderation in eating and drinking. The total quantity of food eaten must be restricted because the requirement for calories is decreased and overweight is to be avoided. Small frequent meals are preferable since sudden death often results from overeating. There is no specific diet for the aged. Any well balanced diet which suits the appetite and food habits of the patient, his state of nutrition, and any diseased condition which ⁴²may exist is recommended.

McLester thinks that man's period of productivity can probably be extended to an appreciable degree by dietary means if the effort is begun early in youth and continued ⁴³through life.

McLester in accord with other authorities states that what we wish to do is "to maintain vigor and a sense of well being in older people." ⁴⁴Again no special diet is recommended but it should include milk, cheese, eggs, tender meats, fruits, and green vegetables. The diet should not be highly ⁴⁵seasoned, rich, nor bulky.

⁴² E. V. Cowdry, Problems of Aging (Baltimore: The Williams and Wilkins Company, 1942), p. 875.

⁴³ James S. McLester, Nutrition and Diet in Health and Disease (Philadelphia: W. B. Saunders Company, 1943), p. 268.

⁴⁴ Ibid., p. 269.

⁴⁵ Ibid., p. 270.

"The increasing incidence of defects with age offers strong indication that they are much more largely to be attributed to manner of living than to inheritance, and that no doubt the cumulative effects of faulty eating, and the effects in later life of deficiencies in the diet in early years, are important phases of whatever the manner of living may have had to do with the defects".⁴⁶

This statement by John D. Black summarizes the point of view of students of longevity today regarding the effect of diet on aging.

To summarize the recommendations given in regard to diet for the older man and woman, authorities agree that the protective foods should be supplied in all age groups; and that the oldest group needs vitamins and minerals as much as the growing child does. We should encourage the use of the whole grain in breads and cereals, wider use of fresh fruits and vegetables, and greater use of dairy products and lean meat. A restriction in calories is beneficial for the older person; therefore few starches, sweets, or rich foods are suggested. Meals for the aged should be spaced at regular intervals. There is no specific diet recommendation because individual requirements must be considered.

After surveying the literature, it is evident that more study is needed upon the relation of diet to longevity. The present study of a group of aged people was made to see if a relationship could be observed between past and present dietary habits, and the physical condition of the group.

⁴⁶John D. Black, "The Social Milieu of Malnutrition", The Annals, CCXXV, (January, 1943), 148.

CHAPTER III

PROCEDURE

This study was made in the spring of 1944 at the Masonic and Eastern Star Home and at the Guilford County Home in Greensboro, North Carolina. A short preliminary study had been made at the Masonic and Eastern Star Home in the spring of 1943. Through the cooperation of Miss Hassie Johnson, dietitian at the Masonic and Eastern Star Home, and of Mr. and Mrs. Odell Cummings who are in charge at the County Home, a random sample was taken consisting of 41 women and 24 men whose ages ranged from 60-100 years.

During the study, three men and 12 women were eliminated because of death, serious illness, or the inability of the subject to give sufficient information in regard to dietary habits. The plan of the study eliminated all completely senile individuals of necessity.

The following table gives the age distribution by sex of the group for whom complete data were assembled:

TABLE 1. AGE GROUPING

Home, Sex	60-69	70-79	80-89	90-99	100	All
County Home						
Men	8	4	2	1	0	15
Women	7	2	2	0	0	11
Subtotal	15	6	4	1	0	26
Masonic and Eastern Star Home						
Men	1	2	3	0	0	6
Women	4	6	5	2	1	18
Subtotal	5	8	8	2	1	24
Total	20	14	12	3	1	50

It is apparent that there was a larger number of older individuals at the Masonic and Eastern Star Home than at the County Home. More men were studied at the County Home, more women at the Masonic and Eastern Star Home.

The purpose of the study was to determine whether there was a relationship between the past and present diets and the physical condition of the aged person.

Methods for Collection of Data.

The method of questionnaire and interview was used to secure information concerning each person's past and present diet habits.

The two questionnaire forms used were set up according to the "Seven Basic Food" groups suggested by government nutrition specialists. The first form permitted a check on the approximate average number of servings of the general food groups that each person had eaten each day in the past and was eating at present.

The second form was much more detailed in that specific foods in each group were listed. It was checked as to food likes and dislikes in "earlier life" and at "present". If a food were eaten "frequently", it was checked in column one; if it were eaten "occasionally", it was checked in column two; and if it were "never" eaten, it was checked in column three.

In both forms, a column was left for comments regarding foods such as "never tasted", "did not have when I was a child", "animal food", "too acid", and others. These comments

may be important in studying a person's food likes and dislikes.

The terms "past" diet and diet in "earlier life" refer to the dietary habits most typical of the person's food pattern during those years from childhood up to 50-60 years of age. "Present" refers to the diet in the latter part of life.

Each person was interviewed personally twice; and information for the food charts was obtained. At the same time, an observation chart was filled in as to the condition of the skin, eyes, hair, teeth, voice, ability to hear, posture, degree of activity, weight, signs of malnutrition and mental alertness. Information was obtained concerning illness in the past and at the present. More than one person observed almost all of the subjects studied, and evaluated separately the condition of the skin, hair and eyes as well as judged the posture and mental alertness. Very close agreement of the observers was found.

Supplementary information on the physical condition of the subjects was obtained from records at the Home and from the County Welfare Department Office. Information as to the height and weight of each person was secured, and this was checked where possible by weighing and measuring the person.

Menus were obtained from the dietitians for one week and a record of each person's daily food intake was kept for this period.

Methods for Classification of Data.

Food selection charts 1 and 2 were checked against each

other to determine the reliability of each person in reporting the foods eaten in the past. There were three checks on the present diet - the two food selection charts and the record of the daily food intake.

Food habits for both the past and present were classified as "good", "fair", or "poor" according to the actual score obtained when they were studied and evaluated. A score card based on the "Daily Food Requirements" as set up by the National Nutrition Committee was made and used in the scoring. The requirements are:

- 1 pint milk
- 1 egg
- 1 or more servings of lean meat, poultry, fish or seafood.*
- 1 serving green or yellow vegetable.
- 1 serving of other vegetable.
- 1 serving of potato.
- 1 serving tomatoes, salad greens, or citrus fruit.
- 1 other serving of fruit.
- 2 servings of whole grain cereal or "enriched" cereal.
- Butter or "enriched" margarine.

*Dried beans, peas, soy beans, or peanuts may be substituted for lean meat, poultry, fish or seafood, and eggs not more than three times per week.

A specific score was set for each food with the total possible score at 100. Those who averaged daily a serving of the food were given the highest score; those who ate the food occasionally received half credit; and those never eating it received zero. In the case of meat, two points were deducted if the person never consumed any of the glandular organs. Careful consideration was given to cereals. Those eating home ground cereals received more credit than

those eating highly refined cereals. In the present diet, "enriched" cereals were considered.

In classifying these diets, "Good" was taken to mean a score of 80 - 100 points, "Fair" 70 - 80 points, and "Poor" below 70 points. The detailed system of scoring is given on page four in the appendix.

Physical condition was classified as "Good", "Fair", or "Poor" according to the system of classification described below. A score card with a possible score of 100 points was set up and used as a basis for judging each individual. The following points were considered and definite values assigned to each.

General physical condition of:

- Skin
- Hair
- Eyes
- Ears (Hearing)
- Posture
- Weight
- Degree of Activity
- State of Health (Freedom from Disease)
- Mental Alertness

The term "Good" was taken to mean a score of 80 - 100 points, "Fair" 70 - 80 points, and "Poor" below 70 points. The system of scoring used is given in greater detail on page 15 in the appendix.

For each subject studied a comparison was made of physical condition with both past and present diet. Charts showing the relationship of the three "ratings" given to each subject are included in the next chapter on "Presentation and Discussion of Results".

The forms for food selection charts, observation chart, daily food intake, and score cards, as well as the more complete explanation of the criteria set up for classifying diets and physical condition may be found in the appendix.

CHAPTER IV

RESULTS AND DISCUSSION

The results and discussion are presented under four general headings - past diet histories, present diet records, physical condition, and the relationship of diet to physical condition.

Past Diet Histories.

In checking on the reliability of the reports on past diets, forms A and B were checked against each other. The scores and percentages assigned in this study were based on average typical consumption of the "Seven Basic Food Groups".

For instance, if a person checked that he ate green vegetables frequently on both forms, then his record was checked as being reliable. But if he said that he ate eggs frequently on one; and on the other, said that he never ate them then the reliability was questioned and counted as unreliable information. After each food group was checked in this manner for each person the number of questionable answers was counted and the reliability computed on the basis of percentage for each individual.

The following table presents the reliability between the two forms A and B in regard to past diets as reported by the aged people at both homes.

Agreement of Two Reports on Past Diets in Percentage

Place	60-69% No.	70-79% No.	80-89% No.	90-99% No.	100% No.
County Home	0	8	6	7	5
Masonic Home	0	0	3	9	12
Total	0	8	9	16	17

Judging by the table above, there appears to be a good degree of reliability in the two reports given by each of the subjects at the Masonic Home concerning their past diets. At the County Home, three-fourths of the reports showed an agreement of 80 per cent or above, with only one-fourth in the 70 per cent group. There were no reports showing an agreement below 70 per cent in either of the two homes. This would indicate that the method of securing information on the past diets used in this study was fairly reliable.

The past diets were classified as "good" (80-100), "fair" (70-80), or "poor" (below 70) as determined by the scorecard included in the appendix.

Classification of Past Diet Histories

Place	Good No.	Fair No.	Poor No.
County Home	19	6	1
Masonic Home	23	1	0
Total	42	7	1

The data indicate that the past diets were good in 84 per cent of the subjects studied. It appears that on the whole these older people did have good or fairly good diets in their earlier life. It may be surmised that had they had poor diets they probably would not have been able to survive until 60 years and above. Fitts says that "the real secret of old age lies in the quality of their foods in the first five decades of their lives".¹

¹ Fitts, loc. cit.

The past diets of the group at the County Home and Masonic Home were compared as to the number of foods in each of the "Seven Basic Food Groups" which were eaten "frequently" (F) or "never" (N).

Summary of the Average Number of Food Items Used Per Person in Some Different Food Groups*

	Green and Yellow Vegetables		Oranges Grapefruit Tomatoes		Potatoes Other Vegetables Other Fruit	
	(20 Items)		(6 Items)		(28 Items)	
	F	N	F	N	F	N
Masonic average	10.1	5.9	3.5	1.4	16.0	5.1
County average	8.3	8.0	2.7	2.3	14.4	7.2

*A summary of all food groups used per person will be found in the appendix.

The people at the Masonic Home ate a greater variety of foods within the following groups: green and yellow vegetables, citrus fruits, and other vegetables and fruits.

The above data emphasize a difference in the past food pattern of the people at the two homes. This difference is very likely due to the difference in economic status of the two groups. Those at the Masonic Home were in general from a somewhat higher income level group than those at the County Home. The former group were familiar with a wider variety of food items in the fruit and vegetable groups, and used these foods "frequently" in their diets. There were fewer foods with which they were unfamiliar, and which they used "never".

This wider variety of fruits and vegetables in the diet may have been one of the factors in making the past diet of the Masonic Home group somewhat better than that of the County Home group. It must be remembered that variety is not essential to a well balanced diet; but with other factors being equal, a greater variety of foods tends to promote better nutrition.

Many of the vegetables which we eat now such as asparagus, broccoli, brussel sprouts, eggplant, soy beans, cauliflower, celery and carrots were not known to this group in their earlier days. The vegetables used most were leafy vegetables such as cabbage, collards, mustard and turnip greens, green beans, green peas, okra, squash, sweet potatoes, Irish potatoes, beets, corn and turnips. One woman said that she used radish tops as a green vegetable. Several reported using dandelion greens and poke greens.

Locally grown fruits were used extensively in season. Citrus fruits and other fruits which had to be shipped were usually "luxuries at Thanksgiving and Christmas". Home dried fruits such as apples, peaches, pears, figs and berries were used; but there were very few prunes or raisins.

Raw salads such as we serve today were not used to any great extent. These people however did eat raw vegetables such as cabbage, lettuce, turnips and tomatoes for many commented on eating them as they gathered and prepared them for cooking.

Superstitious beliefs were held about tomatoes by many.

Some would not eat them for "they were poisonous" and others thought that "it was a disgrace to eat tomatoes".

Very little was known about canning vegetables therefore they were either eaten fresh or were dried. Root crops and apples were "hilled" to be used out of season.

Home milled flour was used in a majority of the diets. This insured more nutritive value in the diet because the germ and part of the outer coat were left in the flour. The "shorts" which is the bran part of the cereal was used in making pancakes and muffins.

A few reported that they ate cornbread daily, and had "wheat bread" only on Sunday and in cakes and pies.

These diets contained more homemade molasses and also more honey than our present day diets.

A large number said that they ate the glandular organs especially liver; but that this was mainly at "hog killing" time. Some few did eat them regularly throughout the year.

Several reported that coffee was made from rye and wheat.

Present Diet Records

Again forms A and B were checked against each other to determine the apparent reliability of the reports. The results are given below:

Agreement of Reports on Present Diet in Percentage

	60-69 No.	70-79 No.	80-89 No.	90-99 No.	100 No.
County Home	5	7	9	5	0
Masonic Home	3	4	2	9	6
	8	11	11	14	6

There was a larger number which showed an agreement of 80-100 per cent at the Masonic Home than at the County Home. At the Masonic Home, one-sixth of the subjects were in the 70-79 per cent reliability group, and one-eighth in the group showing below 70 per cent agreement. At the County Home, one-fourth were in the group showing 70-79 per cent reliability, while one-fifth revealed below 70 per cent agreement. The percentage of reliability between the two reports was higher for past diets than for present diets. Perhaps this difference was due to the fact that the subjects had a longer period of time to survey in reporting their past food habits and hence had a clearer view of their typical food pattern rather than thinking of a limited period. On the other hand, they probably thought of present diets in terms of what was served today, yesterday, and possibly Sunday, rather than considering their present diet as a whole.

These checks were made with at least a month's interval between them so there is a possibility that they think of specific foods eaten on specific days rather than food groups used over a period of time in recent years which might give a more representative picture of their average diet.

The two reports of the present diets of each person were checked and scored according to the score card. Summaries of both "present diet as reported" and of "present diet as obtained from an actual dietary record" are given below:

Summary of Present Diet as Reported

	Good No.	Fair No.	Poor No.
County Home	1	3	22
Masonic Home	12	4	8
Total	13	7	30

Summary of Present Diets as Obtained
From a Week's Dietary Record

	Good	Fair	Poor	Total
County Home	0	2	22	24*
Masonic Home	8	5	10	23 x
Total	8	7	32	47

*Two of subjects moved away from the Home before this record was kept.

x Subject was off at work when record was kept.

Tabulation sheets of individual daily consumption of foods in the "Seven Basic Food Groups" are found in the appendix.

County Home:

Both tables indicate that 85 per cent of the subjects at the County Home ate "poor" diets. There is a very close agreement between the two records concerning present diets. The reports showed that this diet contained daily three-fourths of a quart of milk, syrup, potatoes and dried beans often; but an insufficient amount of green and yellow vegetables, fruits, eggs, lean meat, and sources of vitamin C.

Masonic Home:

One-half of the subjects at the Masonic Home had "good" diets, one-sixth "fair", and one-third "poor" as reported.

There is a good agreement in the reported and actual records presented here. The difference may be due to the fact that several months had intervened between the period when the two records were taken and the diets may have really changed slightly because of temporary illness or other factors.

Nutritive Value of "Average" Present Diet of Old
People at the County Home and Masonic Home

	Calories	Protein Gms.	Calcium Gms.	Iron Mgs.	Vitamins			
					A I. U.	B1 Mgs.	C Mgs.	G Mgs.
County Home	2168	68.3	1.54	14.19	1905	1.19	22.5	2.41
Masonic Home	2007	70.3	.94	16.51	5925	1.52	79.0	2.07
R. D.A. for Sedentary man ²	2500	70	0.8	12	5000	1.5	75	2.2
R. D. A. for Sedentary woman ²	2100	60	0.8	12	5000	1.2	70	1.8

The nutritive value of a typical day's diet at the County Home was evaluated as follows:

County Home Diet

Adequacy is as judged by the Required Daily Allowance for a sedentary adult.

Nutrient	Evaluation
Calories	Adequate
Protein	Low-adequate
Calcium	Fully adequate
Iron	Adequate (if molasses and "enriched" flour are used)
Vitamin A	Sometimes low.
Vitamin B1	Low-adequate (if enriched flour is used)
Vitamin C	Consistently low in winter months.
Vitamin G	Adequate

² Clara Mae Taylor, Food Values in Shares and Weights. (New York: the MacMillon Company, (1942). p. 54.

Calculation of the food value of a typical day's diet will be found in the appendix.

The three-fourths of a quart of milk daily insured the calcium and supplied most of the needed vitamin G. The fact that dried beans were used extensively as a meat substitute brought the diet to a low-adequate protein content. Many did not get as many calories as were recommended in the Required Daily Allowance for sedentary adults. The requirement for iron was met when "enriched" flour and molasses were used. The vitamin A content of the diet varied from day to day, and from season to season depending on when green and yellow vegetables were served. The vitamin C content was consistently low throughout the reports in the actual weekly food intake record in the winter-spring season when this study was made.

The fact that so many of the subjects at the County Home had poor diets is due in part to poor appetites, decreased physical activity, and a lack of knowledge concerning the value of eating protective foods. Their dislikes for specific foods, their objection to the way in which the food was prepared and served (because it was different from the way they had it at home), all tended to make their present diet fall in the "poor" group. Very often, they failed to eat such foods as green vegetables, or slaw when they were served.

The diet at the Masonic and Eastern Star Home was well planned and a typical day's diet was evaluated as follows:

Masonic Home Diet

Adequacy is as judged by the Required Daily Allowance for a Sedentary Adult

Nutrient	Evaluation
Calories	Low adequate
Protein	Adequate
Calcium	Adequate
Iron	Adequate
Vitamin A	Adequate
Vitamin B ₁	Adequate
Vitamin C	Adequate
Vitamin G	Slightly low

The fact that one-third of the subjects reported poor diets was due to illnesses at the present such as stomach trouble. It was interesting to note that the three oldest subjects (93, 93, 100 years) ate a well balanced diet and came within the good group for physical condition. They also showed a high per cent of reliability in the two reports given.

Physical Condition

The bodily characteristics considered in determining physical condition were posture, activity, weight, state of health, and mental alertness. The age distribution of the

subjects studied is given in Table 1 in chapter III.

This table shows that the subjects at the Masonic Home tended to be older than those at the County Home. 79 per cent of those at the Masonic Home were above 70 years whereas only 42 per cent at the County Home were in this group.

The physical condition of the aged was classified as "good", "fair", or "poor". The Score card used and also a list of individual scores is found in the appendix. The following table summarizes the relation of physical condition and age.

<u>Physical Condition in Relation to Age</u>			
	Good	Fair	Poor
County Home			
Age:			
60-69	4	2	9
70-79	4	2	0
80-89	0	2	2
90-99	0	0	1
100	0	0	0
Subtotal	8 (31%)	6 (23%)	12 (46%)
Masonic Home			
Age:			
60-69	2	2	1
70-79	5	3	0
80-89	4	2	2
90-99	2	0	0
100	1	0	0
Subtotal	14 (58%)	7 (29%)	3 (13%)
Totals	22 (44%)	13 (26%)	15 (30%)

It is observed that 58 per cent of the people at the Masonic Home and 31 per cent at the County Home were in good physical condition. At the Masonic Home, 13 per cent were in poor physical condition; and 46 per cent in this group at the County Home.

County Home

The group at the County Home showed signs of aging to a greater extent than did those at the Masonic Home even though their average chronological age was less. Their skin in a majority of cases was very wrinkled with a small amount of subcutaneous fat, was dry, and had a yellow tinge characteristic of old age. Their hair was gray or white and rather thin. Their eyes showed symptoms of aging in that there were many wrinkles around the eyes, the lids were thin and drooped in many instances, the eyes were dull, sunken, and the pupils were small. The ability to hear did not appear to be affected to any great extent as only one was definitely hard of hearing.

The group as a whole was not very active. The men were more active than the women, but neither participated in outside activities to any degree. Three of the men were rather active as shown by the fact that they went out-of-doors more often, but they did not have any definite work. In the main, they "sit around and talk".

The women usually remained in their rooms, sewed or crocheted and went out only occasionally. Five out of the eleven women studied were in rolling chairs or in bed all of the time. One did a great deal of sewing - that is machine work for the home. Two of the others were fairly active in that they visited frequently and went out-of-doors often.

There were cases of diabetes mellitus, arthritis,

disturbances of the kidney, liver, and heart, paralysis and high blood pressure in this group as well as other more minor illnesses.

Mental alertness was considered in relation to aging rather than to "intelligence quotient". The inability of some to remember and their ability to recall facts consistently as well as their inattentiveness are examples of decreased mental alertness more likely to be due to aging. In many cases, it was difficult to evaluate the amount of mental deterioration brought about primarily by aging; but the two observers of these characteristics were in close accord in their scoring.

Masonic Home

This group as a whole was much better preserved although as noted from Table I the average of the group was older. It is interesting to note that the three oldest subjects were rated as "Good" in physical condition.

Most of this group were rather active. Several of the women were caring for children in the afternoon and at night. One man (82 years) had a shop where he made knives, another (72 years) delivered messages for the Western Union Telegraph Company, and one (83 years) painted a religious scene at the back of the pulpit for the chapel of the home. Others went to town and to walk very frequently.

This group as a whole had a brighter outlook on life, they had interest in current affairs, and were eager to know about new improvements. Their ability to think consistently,

to recall incidents and people, and their interest in others indicated good mental alertness in a majority of the subjects.

The heights and weights of as many as possible were taken. The results were summarized according to degree of under and over weight. See score used in appendix.

Height and Weight Record Showing Number of Persons at Each
Home Grouped According to Weight

	Normal	Overweight	Underweight
County Home			
Men	8	3	4
Women	5	3	3
Masonic Home			
Men	5	1	0
Women	11	2	5
Totals	29 (58%)	9 (18%)	12 (24%)

This table reveals that the larger number of these people had normal weight. There were more who were slightly underweight than overweight.

These data are interesting in view of the opinion of many authorities on longevity (cited in Chapter II in the Review of the Literature) that longer life is associated with normal or even underweight than with overweight.

The classification was based on the weight for the thirty-year-old as it is recommended as a standard for the average adult past 30 years. Consideration was given to the bone structure and the physical type of the person in rating him as "normal", "overweight", and "underweight".

Relationship of Past and Present Diets to
Physical Condition

The information obtained appears to be fairly reliable and indicates that the past diets of the two groups were good on the whole. 58 per cent of the subjects were still in a "good" physical condition, 29 per cent in "fair" and 13 per cent in "poor". Is there a relationship between diet and physical condition in old people?

In attempting to find the answer to this question, the writer referred to the method that Burke and co-workers in 1943 used in determining the influence of prenatal diet upon the physical condition of the infant at birth. These investigators classified the diets of the mothers as "good" or "excellent", "fair", and "poor" to "very poor". They classified the physical condition of the infant as "good" or "superior", "fair", and "poorest". They then divided the group studied into different categories according to diet and condition.

For example, one category would have a "good" rating for both physical condition of the infant and for the prenatal diet. Then the percentage of cases in this category was³ computed.

In accord with this method, the following categories or classes were worked out in this study for the physical condition of the subject and both past and present diets separately.

³ Bertha S. Burke and others, "The Influence of Nutrition During Pregnancy Upon the Condition of the Infant at Birth", The Journal of Nutrition, XXVI (December 10, 1943), 580.

Classes according to Physical Condition - 1, 2, 3.

Classes according to Past Diet - A, B, C.

Classes according to Present Diet - X, Y, Z.

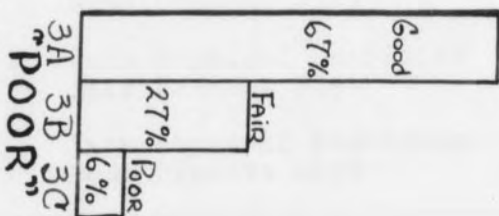
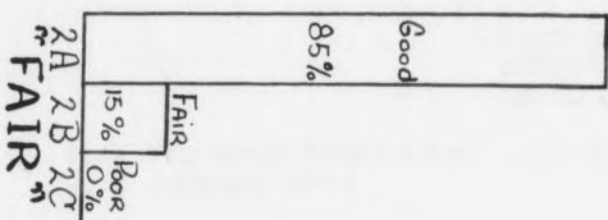
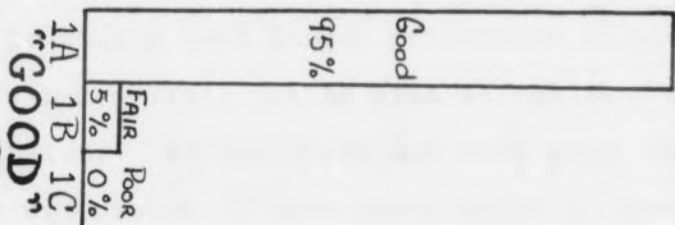
The following classifications and percentages given in Figure 1 show the relation of past diet and present physical condition.

Classification		Percentage of subjects in the classifications
Class 1A	Good Physical Condition	
	Good Past Diet	95
Class 1B	Good Physical Condition	
	Fair Past Diet	5
Class 1C	Good Physical Condition	
	Poor Past Diet	0
<hr/>		
Class 2A	Fair Physical Condition	
	Good Past Diet	85
Class 2B	Fair Physical Condition	
	Fair Past Diet	15
Class 2C	Fair Physical Condition	
	Poor Past Diet	0
<hr/>		
Class 3A	Poor Physical Condition	
	Good Past Diet	67
Class 3B	Poor Physical Condition	
	Fair Past Diet	27
Class 3C	Poor Physical Condition	
	Poor Past Diet	6

Past Diet Rating of Old People in Percentages

Present Physical Condition of the Old People

Figure 1.—The Relation between Past Diets and Present Physical Condition of the Subjects Studied at the County Home and the Masonic Home



Considering the fact that 60 per cent of the subjects were 70 years of age and over; and that the remaining number were between 60-69 years, it appears that past diet is related to present physical condition. Figure 1 indicates that 67 per cent of those in poor physical condition had good diets and that only six per cent had poor diets. This appears to be significant in that a much larger percentage of those having had good diets are still living even though they are in poor physical condition. If the diets had been poor, there is a possibility that the number in this group would be changed considerably.

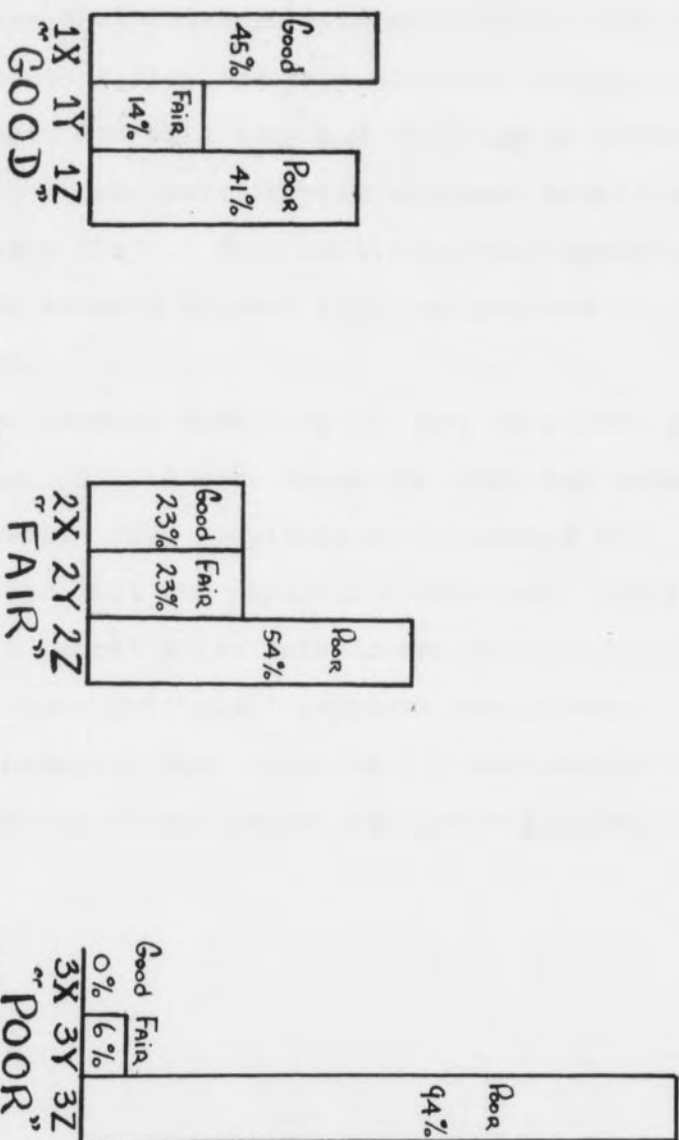
The following classifications and percentages given in figure 2 show the relationship of present diet and present physical condition.

Classification		Percentage of subjects in the classifications
Class 1X	Good Physical Condition	45
	Good Present Diet	
Class 1Y	Good Physical Condition	14
	Fair Present Diet	
Class 1Z	Good Physical Condition	41
	Poor Present Diet	
<hr/>		
Class 2X	Fair Physical Condition	23
	Good Present Diet	
Class 2Y	Fair Physical Condition	23
	Fair Present Diet	
Class 2Z	Fair Physical Condition	54
	Poor Present Diet	
<hr/>		
Class 3X	Poor Physical Condition	0
	Good Present Diet	

Present Diet Rating of Old People (Recorded)

Present Physical Condition of the Old People

Figure 2.—The Relation between Present Diets and Present Physical Condition of the Subjects Studied at the County Home and the Masonic Home



Classification		Percentage of subjects in the classifications
Class 3Y	Poor Physical Condition	6
	Fair Present Diet	
Class 3Z	Poor Physical Condition	94
	Poor Present Diet	

This indicates that these persons maintained good health even though the present diet was poor possibly because their past diets were good and thus they had built up a strong resistance. Of those who were in poor physical condition, 94 per cent had poor diets. This indicates that there is a good correlation between present diet and present physical condition.

Both past and present diet seem to have an effect on physical condition. But in most cases the diet had changed from past to present. This complicates the matter of relationship between diet and physical condition. There were only eight who had "good" diets both in the past and at present. All of these had "good" physical condition.

This study indicates that there is a relationship between past and present diets of old people and their physical condition.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to see if a relationship could be observed between past and present diets and present physical condition in a group of old people. Information was obtained on past and present diets through two personal interviews with each individual. Forms A and B (in the appendix) were set up on the basis of the "Seven Basic Food Groups". These forms, one general and one specific, were used to determine the typical food patterns of the groups. The two forms were checked against each other to determine their reliability. Past and present diets were classified as "Good", "Fair", and "Poor".

The writer and one other person observed and recorded the physical condition of each subject. When the records of each were compared good agreement was found.

Records of the actual food intake of each person were kept at the Masonic Home for four days, and at the County Home for a week.

The past and present diets and present physical condition of each subject were compared to see if a relationship between the two could be observed.

Conclusions:

1. This study indicates that there is a correlation between the past diet and the physical condition of the aged.

2. It also indicates a correlation to a lesser extent between the present diet and the physical condition of old people. This appears to be the relationship in the two institutions, however it could vary if the person were living in her own home and could have free choice in the selection of the food prepared and served.

3. The personal interview method with a questionnaire as a guide proved successful in this study. By this method, the writer was able to make observations of the subject's physical condition and to obtain more detailed information at each interview, than when the questionnaire was left with the individual to fill in and return. Through this method, the writer gleaned many interesting facts and remarks about foods which gave her a clearer picture of the typical food patterns of these two groups of people.

4. This study may seem to have several parts, and while its scope is broad, it seemed desirable to gain supplementary information in order to learn more about the food habits of the group.

5. In considering diet in its relation to physical condition, it is advisable to study both past and present diets because the effects of the two on the present physical condition cannot be considered separately.

6. If time had permitted the study of a larger group, those who gave any unreliable information could have been sorted out. Relationships show up better in larger groups.

7. The cross-check method used in determining the reliability of past and present diets indicated that the information was fairly reliable.

8. The past diets of those of a higher economic level included a greater variety of the foods than did those of the lower economic group and tended to be better diets.

In concluding this study, the writer would like to recommend that:

1. Further studies be made of groups of old people to observe the relationship of past and present diet and physical condition.

2. That dietary studies be made in institutions at seasonal intervals during the year to find the actual food intake over a period of a year's time.

3. That all institutions for old people have a trained dietitian to plan simple well balanced meals which are prepared so as to preserve their full nutritive value and which are attractive when served.

4. That the dietitian advise each person as to what foods to eat in order to maintain health and well being. This form of teaching nutrition individually appears to be very effective for the older person. Each person's problems are considered separately and he is advised accordingly.

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APPENDIX

Name _____

Age _____ Weight _____ Height _____

How many servings of the following did you eat daily?

Food Groups	Past	Present	Comments
Group I			
Green vegetables (cooked)			
Green vegetables (raw)			
Yellow vegetables (cooked)			
Yellow vegetables (raw)			
Group II			
Oranges, tomatoes, grapefruit, raw cabbage or salad greens			
Group III			
Potatoes			
Other vegetables			
Other fruits			
Group IV			
Milk			
Milk products			
Group V			
Meat, poultry, fish, eggs, dried beans, nuts			
Group VI			
White bread			
Whole wheat bread			
Cereal			
Hot breads			
Group VII			
Butter			
Margarine			
Group VIII			
Desserts			
Candy			
Sweets as syrup, honey, jellies, etc.			
Group IX			
Tea			
Coffee			
Carbonated beverages			
Fried foods			
Fat back and bacon			

WOMAN'S COLLEGE, UNIVERSITY OF NORTH CAROLINA
Home Economics Department

Food Selection Chart

Name _____

Directions:

Please check the following chart as to food likes and dislikes.

1. The first three columns are for foods which you ate in your "earlier life." Check as to whether you ate them "Frequently," "Occasionally," or "Never."
2. The next three columns are for foods which you eat at "present." Check as to whether you eat them "Frequently," "Occasionally," or "Never."
3. If you have any comment to make, use the last column.

Example:

1. "Used to eat tomatoes, but they do not agree with me now." or
2. "Have never tasted this food." (Might give reason.)

Food Selection Chart							
Food	Earlier Life			Present			Explanation
	Fre-quent-ly	Occas-ional-ly	Never	Fre-quent-ly	Occas-ional-ly	Never	
I. Green and Yellow Vegetables							
A. Green							
asparagus							
beet greens							
broccoli							
brussel sprouts							
cabbage							
collards							
cress							
green beans							
green peas							
green peppers							
kale							
mustard greens							
okra							
other greens							
spinach							
turnip greens							

Food	Earlier Life			Present			Explanation
	Fre- quent- ly	Occas- ional- ly	Never	Fre- quent- ly	Occas- ional- ly	Never	
B. Yellow							
carrots							
pumpkin							
rutabagas							
squash							
sweet potatoes							
II. Oranges							
Grapefruit							
Leaf lettuce							
Raw cabbage							
Raw salad greens							
Tomatoes							
cooked							
juice							
raw							
III. Potatoes and other fruits and vegetables							
beets							
cauliflower							
celery							
corn							
cucumber							
eggplant							
lima beans							
onions							
soy beans							
sauerkraut							
white potatoes							

Food	Earlier Life			Present			Explanation
	Fre- quent- ly	Occas- ional- ly	Never	Fre- quent- ly	Occas- ional- ly	Never	
white turnips							
others							
Canned vegetables							
Other fruits:							
apples							
bananas							
berries							
cherries							
figs							
melons							
peaches							
pears							
persimmons							
plums							
others							
Canned fruit							
Dried fruit							
prunes							
raisins							
others							
IV. Milk and Milk Products							
buttermilk							
canned milk							
cheese							

Food	Earlier Life			Present			Explanation
	Fre- quent- ly	Occas- ional- ly	Never	Fre- quent- ly	Occas- ional- ly	Never	
cottage cheese							
cream							
dried milk							
ice cream							
sweet milk							
V. Meat							
beef							
ham							
lamb							
pork							
veal							
variety meats:							
brains							
liver							
heart							
kidney							
sweet breads							
tongue							
tripe							
miscellaneous meats:							
canned meats							
liver pudding							
sausage							
Poultry							
Game(rabbits, etc.)							
Fish							
canned							

Food	Earlier Life			Present			Explanation
	Fre- quent- ly	Occas- sion- ally	Never	Fre- quent- ly	Occas- sion- ally	Never	
fresh water							
salt water							
other seafood							
Eggs							
Dried beans and peas							
dried pinto beans							
dried soy beans							
other dried beans							
dried peas							
Nuts							
peanuts							
other nuts							
peanut butter							
VI. Bread, flour, cereals							
Breads							
corn bread							
hot breads							
white bread							
whole wheat bread							
others							
Cereals							
cream of wheat							
grits							
oatmeal							
rice							
wheat cereal							
others							

Food	Earlier Life			Present			Explanation
	Fre- quent- ly	Occas- ional- ly	Never	Fre- quent- ly	Occas- ional- ly	Never	
Macaroni							
VII. Butter							
Fortified margarine							
VIII. Sweets							
cake							
candy							
cookies							
custards and puddings							
honey							
jellies, jam, preserves							
pie							
simple milk dessert							
sugar							
syrup							
IX. Miscellaneous							
bacon							
carbonated beverages							
coffee							
fat back							
fried foods							
mayonnaise							
tea							

Observation Chart

Name _____ Age _____

Condition of:

Skin

Eyes

Hair

Teeth

Posture

Degree of Activity

Overweight

Underweight

Normal Weight

Signs of Malnutrition

Mental Alertness

Illnesses

Past

Present

SCORE CARD FOR JUDGING DIETS

Food Group	Score for foods averaged daily	Score for foods eaten occasionally
Green or yellow vegetable	15	8
Oranges, tomatoes, grapefruit	15	7
Potatoes	5	3
Other Vegetable	5	3
Other fruit	5	2
Milk and Milk Products	20	10
Meat*, poultry, fish or dried beans, peas, nuts.	10	5
Egg	10	5
Bread, flour, cereals ^x (Natural whole grain or "enriched")	10	5
Butter or fortified margarine	5	2

* If glandular organs were not consumed, 2 points were deducted.

^x If cereal was home milled, a credit of 7 was given.

TABULATION SHEET I

SUMMARY OF FOOD LIKES AND DISLIKES OF A GROUP OF AGED PEOPLE AT THE GUILFORD COUNTY HOME AS GIVEN ON FORM B

	Green and Yellow Vegetables		Oranges Grapefruit Tomato		Potatoes and Other Vegetables and Fruits		Milk and Milk Products		Meat Poultry Fish, Eggs		Bread Flour Cereals		Butter and Fortified Margarine	
	20 Items		6 Items		28 Items		8 Items		29 Items		9 Items		2 Items	
SUBJECT	F	N	F	N	F	N	F	N	F	N	F	N	F	N
C1	8	6	2	4	10	3	2	4	9	12	4	2	1	1
C2	11	6	1	5	15	10	3	3	10	16	4	3	1	1
C 3	9	7	0	2	12	9	2	2	11	5	2	6	1	1
C4	5	10	3	3	13	7	1	1	7	11	4	3	1	1
C5	6	12	3	3	10	13	1	4	5	8	3	5	0	2
C6	11	6	3	4	12	9	4	3	10	12	4	2	1	0
C7	5	13	0	5	12	8	3	3	7	10	3	2	1	1
C8	3	8	2	2	8	5	2	2	5	11	1	2	1	1
C9	10	6	3	1	17	5	4	2	13	7	5	2	1	1
C10	6	12	2	1	12	8	3	3	6	13	4	7	1	1
C11	12	5	5	1	17	5	2	3	11	7	3	4	1	1
C12	3	13	2	2	11	12	2	2	9	11	4	2	1	1
C13	10	6	4	2	16	7	4	4	12	5	6	2	1	0
C14	8	9	3	2	10	8	3	2	12	6	5	2	1	1
C15	10	8	4	1	22	5	3	2	17	8	6	2	1	1
C16	6	11	4	0	16	3	3	2	12	10	3	0	1	1
C17	11	8	2	3	18	6	3	2	9	13	3	4	1	1
C18	13	5	5	0	19	7	6	1	14	4	6	4	1	1
C19	14	6	5	1	16	6	6	2	13	7	2	0	1	0
C20	10	6	4	0	18	4	4	1	12	5	5	1	1	1
C21	6	10	3	3	18	10	4	2	17	5	2	3	1	1
C22	8	7	2	3	15	10	2	2	9	10	5	5	1	1

TABULATION SHEET I CONT'D.

SUMMARY OF FOOD LIKES AND DISLIKES OF A GROUP OF AGED PEOPLE AT THE GUILFORD COUNTY HOME AS GIVEN ON FORM B

	Green and Yellow Vegetables		Oranges Grapefruit Tomato		Potatoes and Other Vegetables and Fruits		Milk and Milk Products		Meat Poultry Fish, Eggs		Bread Flour Cereals		Butter and Fortified Margarine	
	# 20 Items		6 Items		28 Items		8 Items		29 Items		9 Items		2 Items	
	* F x N		F N		F N		F N		F N		F N		F N	
SUBJECT														
C23	9	8	3	2	15	6	3	2	19	8	4	4	1	1
C24	4	8	2	2	15	7	4	1	12	8	2	1	1	0
C25	9	5	0	7	15	9	3	3	19	7	4	4	1	1
C26	9	8	4	1	14	5	3	2	9	3	1	2	1	0
Totals	216	209	71	60	376	181	80	60	289	212	95	74	25	22

* F - denotes foods eaten frequently.

x N - denotes foods never eaten because of dislike; or in some cases, the food has never been tasted.

- Denotes number of specific foods listed under general food group.

TABULATION SHEET II

SUMMARY OF FOOD LIKES AND DISLIKES OF A
GROUP OF AGED PEOPLE AT THE MASONIC AND
EASTERN STAR HOME AS GIVEN ON FORM B

SUBJECT	Green and Yellow Vegetables		Oranges Grapefruit Tomatoes		Potatoes Other Veg- etables Other Fruit		Milk and Meat Milk Products		Poultry Fish, Eggs		Bread Flour Cereals		Butter and Fortified Margarine	
	20 Items		6 Items		28 Items		8 Items		29 Items		9 Items		2 Items	
	F	N	F	N	F	N	F	N	F	N	F	N	F	N
M1	8	7	4	2	17	7	3	3	17	6	3	3	1	1
M2	11	3	2	1	16	4	2	2	11	7	3	3	1	1
M3	14	5	3	2	18	7	3	0	11	0	3	3	1	0
M4	12	6	1	4	15	4	4	2	15	7	4	2	1	1
M5	10	5	3	3	16	9	2	2	14	6	4	3	1	1
M6	10	2	4	1	15	5	1	3	8	2	3	2	1	1
M7	7	11	4	2	18	6	4	2	9	8	4	1	1	0
M8	6	10	5	0	16	5	3	4	9	9	4	3	1	1
M9	8	10	2	2	15	7	1	5	10	7	3	3	1	1
M10	14	0	4	0	20	2	0	4	13	5	5	2	1	0
M11	12	6	4	2	20	3	5	1	13	7	5	3	1	1
M12	11	4	4	0	20	1	1	1	13	5	3	2	0	1
M13	12	7	3	3	15	9	4	3	15	8	4	3	1	0
M14	14	3	6	0	18	6	4	3	16	10	4	5	1	1
M15	12	4	3	2	17	5	4	3	10	8	3	2	1	0
M16	12	1	4	1	19	3	1	2	8	11	4	2	1	0
M17	10	6	1	2	12	6	4	3	14	6	1	3	0	0
M18	12	2	4	0	18	1	3	2	10	8	3	0	1	1
M19	4	10	6	0	15	8	5	3	7	18	6	3	1	1
M20	8	7	4	1	14	7	2	3	16	9	2	3	1	0
M21	11	4	4	0	14	3	13	1	9	11	5	1	1	0
M22	8	10	4	1	18	3	4	3	10	8	3	2	1	1

TABULATION SHEET II CONT'D.

SUBJECT	Green and Yellow Vegetables		Oranges Grapefruit Tomatoes		Potatoes Other Veg- etables Other Fruit		Milk and Milk Products		Meat Poultry Fish, Eggs		Bread Flour Cereals		Butter and Fortified Margarine	
	20 Items		6 Items		28 Items		8 Items		29 Items		9 Items		2 Items	
	F	N	F	N	F	N	F	N	F	N	F	N	F	N
M23	11	4	3	2	18	5	4	3	15	6	3	2	1	1
M24	9	5	2	2	14	7	2	3	10	11	6	3	0	1
Total	246	132	84	33	395	123	69	61	280	183	88	59	21	15

* F - Denotes foods eaten frequently.

X - N - Denotes foods never eaten because of dislike; or in some cases, the food has never been tasted.

- Denotes number of specific foods listed under general food group.

TABULATION SHEET III

WEEKLY CONSUMPTION OF FOODS BY OLD PEOPLE AT THE COUNTY HOME

	C1	C2	*C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13
Green and Yellow Vegetables	x 2	2	1	3	2	4	3	2	0	1	1	1	3
Oranges	1	2	0	0	2	1	0	1	2	0	1	0	2
Tomatoes													
Grapefruit													
Potatoes	7	5	1	8	6	4	4	5	2	0	5	6	9
Other Vegetables	4	6	0	2	1	2	3	3	2	0	3	3	4
Other Fruits	0	0	0	0	0	0	0	0	0	0	0	0	0
Milk	19	18	1	13	14	14	14	14	7	1	12	10	13
Meat (fat)	7	4	1	5	0	6	4	7	7	0	7	6	6
Meat (lean)	1	2	0	1	2	1	2	2	2	0	2	1	2
Dried Beans	0	2	0	4	1	2	2	2	1	0	0	2	2
Eggs	1	2	1	0	1	3	2	1	5	0	1	1	8
Corn Meal	1	2	0	6	0	4	6	11	6	1	1	3	0
Refined Cereals	24	18	3	20	21	15	14	17	19	2	21	20	25
Whole Grain Cereals	5	2	0	0	4	2	2	1	3	0	1	4	4
Butter	4	5	0	1	0	7	5	3	4	0	3	2	4
Syrup	6	2	1	7	0	7	3	0	0	1	6	7	7
Desserts	1	2	0	1	1	4	1	1	1	0	1	0	2

TABULATION SHEET III CONT'D.

WEEKLY CONSUMPTION OF FOODS BY OLD PEOPLE AT THE
COUNTY HOME

	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25	C26
Green and Yellow Vegetables	5	3	1	2	3	7	1	6	0	3	3	2	3
Oranges													
Tomatoes													
Grapefruit	2	1	3	0	1	7	1	2	2	3	8	1	12
Potatoes	7	5	7	7	7	8	8	6	9	7	8	3	7
Other Vegetables	3	1	2	3	5	4	2	5	2	1	1	1	1
Other Fruits	0	0	2	0	0	3	1	0	1	0	0	0	6
Milk	8	13	4	2	14	2	13	13	9	7	16	1	12
Meat (fat)	6	7	7	7	4	1	0	8	2	5	8	7	0
Meat (lean)	3	2	2	3	4	2	2	3	2	2	2	2	2
Dried Beans	4	5	0	0	0	1	3	5	1	0	0	3	2
Eggs	1	1	7	1	9	4	1	2	1	7	10	7	8
Corn Meal	5	4	1	1	1	5	7	4	2	1	4	0	5
Refined Cereals	20	22	26	22	6	15	17	17	22	19	21	22	22
Whole Grain Cereals	3	3	3	2	21	2	4	0	3	3	1	2	6
Butter	5	5	5	5	4	6	3	4	7	4	8	7	5
Syrup	7	7	0	0	0	3	4	0	10	0	7	3	0
Desserts	1	1	0	0	1	1	1	1	3	1	6	0	2

* Represents only one day's diet as this person moved away before report was completed.

x Represents number of servings per week.

TABULATION SHEET IV

FOUR-DAY CONSUMPTION OF FOODS BY OLD PEOPLE AT THE MASONIC AND EASTERN STAR HOME

	* M1	M2	* M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13
Green and Yellow Vegetables	# 5	0	0		1	4	4	2	3	2	4	3	3
Oranges													
Tomatoes													
Grapefruit	3	2	3		2	4	3	2	2	3	5	1	0
Potatoes	1	0	0		1	0	0	2	1	2	3	1	3
Other													
Vegetables	4	0	0		2	2	2	1	6	4	4	1	4
Other Fruits	1	0	2		5	6	3	2	3	3	4	2	1
Milk	7	4	10		10	6	1	2	6	0	7	1	6
Meat (fat)	0	0	0		0	0	0	0	0	0	0	0	0
Meat (lean)	6	0	1		0	5	0	3	6	3	2	3	3
Dried beans	2	0	0		0	0	0	1	0	1	1	0	2
Eggs	6	3	7		4	3	0	0	0	4	6	4	8
Cereals													
Refined	10	5	0		9	9	5	3	7	10	0	11	8
Corn	4	0	12		0	2	0	0	4	0	0	0	2
Whole Wheat	3	3	0		5	7	6	11	5	6	15	4	6
Butter	5	2	7		7	9	8	5	1	9	7	1	9
Desserts	1	1	2		3	6	3	4	3	4	4	2	1

TABULATION SHEET IV CONT'D.

FOUR-DAY CONSUMPTION OF FOODS BY OLD PEOPLE AT THE
MASONIC AND EASTERN STAR HOME

	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24
Green and Yellow Vegetables	5	4	5	4	3	4	3	3	4	6	6
Oranges											
Tomatoes											
Grapefruit	4	4	4	3	0	6	4	3	3	5	5
Potatoes	4	3	1	1	1	2	2	2	2	2	0
Other Vegetables	2	3	2	0	2	2	4	1	5	5	3
Other Fruits	5	5	3	4	0	3	3	3	4	5	5
Milk	10	10	6	3	11	9	6	8	3	4	0
Meat (fat)	0	0	0	0	0	0	0	0	0	0	0
Meat (lean)	3	2	5	2	3	2	0	0	4	4	3
Dried beans	0	0	0	1	0	0	0	0	0	0	0
Eggs	5	4	4	6	5	5	0	0	5	6	5
Cereals											
Refined	3	10	9	3	13	6	0	7	5	8	8
Corn	2	0	1	1	0	1	4	0	0	3	3
Whole Wheat	7	2	7	12	3	5	8	3	12	3	4
Butter	7	7	1	3	9	3	7	6	9	9	7
Desserts	4	1	4	3	2	3	2	2	3	3	5

*M2 - Subject was sick when record was kept and did not eat regular diet.

x M4 - Subject was at work when record was kept.

- Represents number of servings per day.

AVERAGE DAY'S DIET AT THE MASONIC HOME

Foods	Measures	Calories	Protein	Calcium	Iron	Vitamins			
						A	B	C	G
Orange	1 medium	80	1.4	42	0.47				
Cereal (grits)	$\frac{1}{2}$ cup	67	1.6	3	1.16				
Egg	1	70	6.3	29	1.36	720	072		1.68
Bread - Whole Wheat	2 slices	150	5.4	34	1.92		186		.058
Jelly	2 tsp.	67	0.1						
Butter	1 tsp.	30				185			
Vegetable soup	$\frac{1}{2}$ cup	56	1.2	22	0.63	256	168	12	.126
Pork	1 piece	100	17.6	10	3.26		354		.118
Boiled cabbage	$\frac{1}{4}$ cup	20	1.0	29	0.45	35	043	9	.064
Buttered carrots	$\frac{1}{4}$ cup	15	0.4	16	0.20	1022	028	1	.029
Hashed potatoes	$\frac{1}{4}$ cup	100	2.2	28	1.00	200	061	6	.076
Gingerbread	$\frac{1}{2}$ piece	100	2.0	45	.90	117	009		.027
Raw apple	1 small	75	0.5	10	0.45	90	051	8	.038
Bread	1 slice	75	3.0	15	0.84		084		.026
Butter	1 tsp.	30				185			
Milk	1 cup	170	8.1	291	0.60	470	129	5	.531
Grits	$\frac{1}{2}$ cup	67	1.6	3	0.16				
Egg	1	70	6.3	29	1.36	720	072		.168
Bread	2 slices	150	1.0	20	0.90	180	102	16	.076
Cookies	1	200	2.0	16	0.80				
Applesauce	$\frac{1}{2}$ cup	135	0.5	10	0.45	90	034	5	.038
Milk	1 cup	170	8.1	291	0.60	470	129	5	.531
Butter	1 tsp.	30				185			
Total		1837	70.3	.943	16.51	5925	1.522	79	2.074
Sedentary Man's Requirement		2500	70	0.800	12.00	5000	1.500	75	2.200

Ref. Taylor's Food Values in Shares and Weights.

CALCULATION OF AVERAGE DAY'S DIET AT COUNTY HOME

Foods	Measures	Calories	Protein	Calcium	Iron	Vitamins			
						A	B ₁	C	G
Milk	2 cups	340	16.2	582	1.20	940	258	10	1.062
Fat meat	1 piece	150	3.3						
Biscuit	4	200	6.0	36	.40	160	040		.086
Syrup	2 T	130	1.2	118	3.26				
Butter	1 tsp.	30				182			
Beans	$\frac{1}{2}$ cup	200	8.8	58	3.88		195		.126
Potatoes	$\frac{1}{2}$ cup	100	2.2	28	1.00	100	.062	5.0	.072
Cornbread	2 slices	400	9.6	80	1.20		.288		.342
Pickles		50	0.2	10	0.30				
Potato soup	$\frac{1}{2}$ cup	200	5.8	147	1.40	520	.132	6	.306
Bread	3 slices	180	6.0	33	1.20		.168		.048
Beans	0								
Buttermilk	1 cup	88	90	263	0.75		.080	4	.374
Sugar									
Totals		2168	68.3	1.542	14.19	1905	1.192	22.5	2.416
Diet Requirement for Sedentary Man		2500	70	0.8	12.00	5000	1.500	75	2.200

SCORE FOR BODILY CHARACTERISTICS

Maximum Score - 100

Characteristics and Credits	Perfect Score
General physical condition of	20
Skin 5 Hair 5 Eyes 5 Ear (hearing) 5	
Posture	15
Definitely erect 15 Fairly erect 10 Stooped 0 - 5	
Weight	15
Within normal for height, age 30, and bodily structure. 15	
Slightly over or under weight 10	
Decidedly over or under weight 0 - 5	
Degree of Activity	15
Very active 15 Moderately active 10 Inactive 0 - 5	
State of Health	20
Minor illness only 15 Illness; some degenerative change 10	
Definite degenerative disease 0 - 5	
Mental Alertness	15
No signs of deterioration because of senility 15 Slight mental deterioration 10 Definitely Detectable Mental Deterioration 0 - 5	

CRITERIA FOR JUDGING BODILY CHARACTERISTICS OF THE AGED

I In judging the general physical condition the following factors are considered:

1. Skin

- (a) Number and depth of wrinkles due to degeneration and loss of elastic tissue.
- (b) Amount of subcutaneous fat present; the loss of which causes wrinkles and leanness.
- (c) Color of skin; the aging skin becomes yellow, thin, dry, glossy, and scaly.
- (d) Formation of brown spots on the skin or the presence of rash or eczema.

2. Hair

- (a) Degree of graying of hair.
- (b) Amount of hair.

3. Eye

- (a) Condition of eyelid: The eyelids of the aged are thin, lacking in subcutaneous fat, and may be drooped because of loss of elasticity.
- (b) Cornea: The cornea loses some of its luster and transparency in old age and becomes dull.
- (c) Eyeball: The eyeball recedes and the skin around the eye wrinkles.
- (d) Color: The color of the eye fades; and the pupil becomes smaller.
- (e) Moisture. The water content of the eye is decreased.
- (f) Vision: There is a "steady decrease of the average efficiency of all measurable visual functions with advanced years."¹

4. Ear (Hearing)

- (a) Impaired hearing for high pitched tones occurs frequently in older people and is not considered abnormal).
- (b) Degree of impaired hearing for low tones (abnormal).

II Posture

Classified as:

- (1) Erect and well balanced.
- (2) Fairly erect
- (3) Stooped

¹ E. V. Cowdry, Problems of Aging, "Baltimore; the Williams and Wilkins Co.," (1942), p. 554.

TABULATION SHEET V

Summary of Diet Scores, Physical Condition, Score, and Reliability Score of Old People
at the Masonic and Eastern Star Home

Subject	Age	Length of Stay at the Home	Past Diet Diet Score	Diet Reliability Score	Reported Diet Diet Score	Present Diet Reliability Score	Actual Diet Diet Score	Physical Condition Score
M1	82		Good 98	100%	Good 88	75%	Good 86.75	Good 91
M2	71		Good 89	92%	Good 88	75%	Poor 60.00	Fair 70
M3	84		Good 81	92%	Poor 67	68%	Poor 61.25	Poor 68
M4	72		Good 86	100%	Good 80	92%		Good 80
M5	83		Good 93	100%	Fair 78	100%	Poor 65.00	Good 87
M6	61		Good 92	88%	Good 86	75%	Good 90.00	Good 82
M7	83		Fair 75	100%	Poor 67	92%	Poor 52.50	Good 84
M8	88		Good 82	92%	Poor 45	100%	Poor 50.25	Good 80
M9	81		Good 80	92%	Poor 62	68%	Fair 70.00	Fair 71

TABULATION SHEET v CONT'D.

Summary of Diet Scores, Physical Condition, Score, and Reliability Score of Old People
at the Masonica and Eastern Star Home

Subject	Age	Length of Stay at the home	Diet Score	Past Diet Reliability Score	Reported Diet Score	Present Diet Reliability Score	Actual Diet Score	Physical Condition Score
M10	67		Good 80	100%	Poor 56	92%	Poor 63.00	Good 88
M11	77		Good 99	100%	Good 96	100%	Good 93.75	Good 92
M12	72		Good 91	92%	Poor 56	88%	Poor 53.75	Good 86
M13	67		Good 88	92%	Fair 78	75%	Fair 73.75	Fair 70
M14	70		Good 95	100%	Good 95	100%	Good 95.00	Good 92
M15	100		Good 92	100%	Good 93	100%	Good 90.00	Good 82
M16	93		Good 86	88%	Good 88	92%	Good 88.75	Good 90
M17	70		Good 87	88%	Good 84	66%	Fair 73.25	Fair 71
M18	64		Good 96	100%	Poor 55	88%	Poor 66.50	Poor 60

TABULATION SHEET VI

Summary of Diet Scores, Physical Condition Score, and Reliability Score of Old People
at the County Home

Subject	Age	Length of Stay at the Home	Past Diet		Present Diet		Actual Diet Score	Physical Condition Score
			Diet Score	Reliability Score	Reported Diet Score	Reliability Score		
C1	66		Good 86	75%	Poor 57	83%	Poor 53.42	Poor 60
C2	78		Good 84	83%	Poor 63	66%	Poor 56.86	Good 83
C3	69		Good 86	91%	Poor 65	66%	Moved	Poor 60
C4	73		Good 82	83%	Poor 60	66%	Poor 50.50	Fair 72
C5	68		Fair 76	91%	Poor 58	60%	Poor 48.27	Poor 60
C6	74		Good 83	75%	Fair 78	83%	Poor 60.23	Good 85
C7	67		Fair 72	100%	Poor 54	83%	Poor 54.72	Poor 50
C8	70		Fair 70	75%	Poor 59	91%	Poor 53.61	Fair 76
C9	93		Good 92	100%	Poor 59	75%	Poor 38.96	Poor 55

TABULATION SHEET VI CONT'D.

Summary of Diet Scores, Physical Condition Score, and Reliability Score of Old People
at the County Home

Subject	Age	Length of Stay at the Home	Past Diet		Past Diet		Actual Diet Score	Physical Condition Score
			Diet Score	Reliability Score	Reported Diet Score	Reliability Score		
C10	84		Fair 70	75%	Poor 61	83%	Moved	Fair 78
C11	65		Good 90	75%	Poor 60	91%	Poor 43.60	Poor 60
C12	65		Poor 64	83%	Poor 56	91%	Poor 42.52	Poor 64
C13	65		Good 89	91%	Fair 70	91%	Poor 63.56	Good 85
C14	80		Good 88	75%	Poor 65	83%	Poor 64.86	Fair 73
C15	60		Good 99	91%	Poor 66	76%	Poor 52.91	Good 88
C16	66		Fair 77	75%	Poor 66	83%	Poor 54.16	Poor 60
C17	89		Good 88	83%	Poor 48	91%	Poor 36.84	Poor 63
C18	67		Good 94	91%	Fair 76	75%	Poor 68.12	Poor 65

TABULATION SHEET VI CONT'D.

Summary of Diet Scores, Physical Condition Score, and Reliability Score of Old People
at the County Home

Subject	Age	Length of Stay at the Home	Past Diet		Present Diet			Physical Condition Score
			Diet Score	Reliability Score	Reported Diet Score	Reliability Score	Actual Diet Score	
G19	75		Good 94	92%	Poor 57	75%	Poor 68.48	Good 91
G20	79		Good 94	100%	Poor 62	75%	Poor 47.46	Good 80
G21	69		Good 93	100%	Poor 65	58%	Poor 63.30	Good 82
G22	62		Good 82	75%	Poor 62	83%	Poor 50.70	Poor 64
G23	64		Good 94	100%	Poor 67	75%	Poor 64.14	Fair 73
G24	60		Good 80	88%	Good 81	88%	Fair 73.62	Good 80
G25	80		Fair 74	83%	Poor 30	75%	Poor 38.28	Poor 34
G26	65		Good 91	91%	Poor 68	83%	Fair 75.24	Fair 72

TABLE XI

NUMBER AND PERCENTAGE OF OLD PEOPLE IN THE DIFFERENT CLASSIFICATIONS AT THE
COUNTY HOME AND MASONIC HOME

Physical Condition Rating	Past Diet Rating						Recorded Present Diet Rating							
	"Good"		"Fair"		"Poor"		Total	"Good"		"Fair"		"Poor"		Total
	No.	%	No.	%	No.	%		No.	%	No.	%	No.	%	
	No.	%	No.	%	No.	%		No.	%	No.	%	No.	%	
"Good"	21	95	1	5	0	0	22	10	45	3	14	9	41	22
"Fair"	11	85	2	15	0	0	13	3	23	3	23	7	54	13
"Poor"	10	67	4	27	1	6	15	0	0	1	6	14	94	15

TABLE XI CONT'D.

	Actual Present Diet						
	"Good"		"Fair"		"Poor"		Total
	No.	%	No.	%	No.	%	No.
"Good"	8	38	1	5	12	57	21
"Fair"	0	0	6	50	6	50	12
"Poor"	0	0	0	0	14	1000	14

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THE STATUS OF BUSINESS TEACHER-TRAINING FACILITIES IN THE
WHITE DEGREE-GRANTING INSTITUTIONS OF THE STATE OF
NORTH CAROLINA IN 1940

by

Artelee Puett

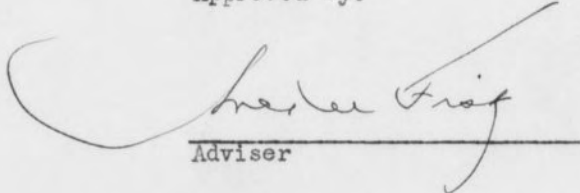
A thesis submitted to the Faculty of
the University of North Carolina in
partial fulfillment of the requirements
for the degree of Master of Science in
the Department of Business Education

✓
3798

Greensboro

1944

Approved by:


Adviser

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CHAPTER I

THE PROBLEM

Introduction

Business teacher training is relatively new in North Carolina. The first degree-granting institution in North Carolina to offer such work was The Woman's College of the University of North Carolina in Greensboro in 1932. Since that time business education curricula have been organized at High Point College, at Lenoir Rhyne College, at Western Carolina Teachers College, at Catawba College, at East Carolina Teachers College, at Elon College¹ and at Queens College.

This study, undertaken in 1940, examines the facilities for the training of white teachers of business in North Carolina. The importance of this phase of business education was expressed as follows by Graham in her report of an earlier investigation of national scope:

The preparation received by teachers of business subjects has an effect upon the aims, curricula, and procedures of present and future business education. The amount and quality of academic and professional preparation given to teachers of business subjects will determine in large measure their philosophy of education, their recognition of its sociological implications, and their ability to participate in the process of administering education as a social force. The future progress of business education is dependent upon the preparation given to prospective teachers.²

¹Elon College reported the organization of its teacher-training department as of 1929, but according to a Statement of Facts Relative to Secondary Commercial Education in North Carolina, 1930, signed by J. Henry Highsmith, Director of School Inspection, State Department of Public Instruction, and others; and a Statement of Facts and Resolution Regarding the Needs of Commercial Education in the Public Schools in North Carolina drawn up by the AA-1 High School Principals' Association, there was no institution in the state providing collegiate training for commercial teachers as of June 1931.

²Jessie Graham, "The Evolution of Business Education in the United States and Its Implications for Business-Teacher Education." (Doctoral dissertation, University of Southern California Education Monographs, 1933-34 Series, No. 2), page 6.

As far as can be ascertained, there is no reported study of the status of business teacher-training facilities in the white degree-granting institutions in North Carolina. Hoadley³ made such a study of national scope in 1929, but at that time no institution in North Carolina was offering business teacher training. O'Briant's⁴ study in 1940 included only institutions with chapters of Pi Omega Pi. There was then no chapter in North Carolina.

Harman, in a Master's study, surveyed the development of business education in North Carolina⁵; and certain aspects of business teacher training were included in Tarkington's doctoral investigation of the comparison of the state university programs for training business teachers with the programs for training home economics, English, and social science teachers.⁶

These studies are reviewed at the end of this chapter, and summary comments are presented concerning such phases as: entrance requirements for business teacher-training students, subjects most frequently required, practice teaching, placement, business experience, and college business teacher personnel.

Purpose

Specifically, this study seeks to ascertain the status as of 1940, of the eight degree-granting institutions offering business

³Ruth Hoadley, "Status of Commercial Teacher Training in the United States." Unpublished Master's thesis, State University of Iowa, 1929.

⁴Margaret Shepherd O'Briant, "The Status of Business Education in Institutions with Chapters of Pi Omega Pi." Unpublished Master's thesis, Oklahoma Agricultural and Mechanical College, 1940.

⁵Clay Harman, "The Development and Status of Business Education in North Carolina." Unpublished Master's thesis, University of North Carolina, 1940.

⁶Abstract of doctoral dissertation, New York University, 1938, published in The National Association of Commercial Teacher-Training Institutions, Bulletin No. 18, 1939.

teacher-training to white students in North Carolina, with respect to the growth, development, and enrollment of each; curricular requirements and offerings; administrative procedures relative to the business teacher-training program; faculty personnel; equipment, and non-teaching services.

Procedure and Sources of Data

In the approach to this study, similar studies were reviewed for techniques, and a bibliography was compiled of collegiate researches relating to the business teacher-training facilities in colleges and universities of the United States. This bibliography is presented in the Appendix for its possible value to other investigators.

The data for the present study were compiled as far as was possible from the 1940 catalogues of the colleges concerned. Supplementary information was obtained through an individualized questionnaire for each college. These questionnaires were sent to the presidents of the colleges with a request that they be handed to the proper official. Letters of inquiry were later sent to the colleges for additional information concerning the nonteaching services rendered by the department, enrollments, faculty members, and the business teacher-training library. All the initial questionnaires were returned. Six replies were received in response to the inquiries concerning nonteaching services and the library, and eight were received concerning enrollments and faculty members.

The eight institutions named at the beginning of this chapter constitute all the degree-granting teacher-training institutions offering business teacher-training courses for white students in 1940, according to the Bureau of Certification of the North Carolina Department of Education. Table I gives the location and type of control for each of these colleges.

TABLE I

WHITE INSTITUTIONS IN NORTH CAROLINA GRANTING DEGREES
FOR BUSINESS TEACHER-TRAINING COURSES

NAME	LOCATION	TYPE OF CONTROL
Woman's College of the University of North Carolina	Greensboro	State
Catawba College	Salisbury	Evangelical and Reformed Church
East Carolina State Teachers College	Greenville	State
Elon College	Elon College	Congregational-Christian Church
High Point College	High Point	Methodist Church
Lenoir Rhyne College	Hickory	United Evangelical Lutheran Church
Queens College	Charlotte	Presbyterian Church
Western Carolina Teachers College	Cullowhee	State

Review of Other Studies

The beginnings of teacher-training courses for business teachers in the United States are described by Graham as follows:

At the beginning of the period of economic integration and industrial organization, business-teacher education was as simple and unorganized as the American business of the time. Teachers were brought into the schools from offices and business colleges. In many cases, academically-trained teachers who were pressed into service, acquired knowledge and skill in business subjects as best they could, for there was no organized training available.

The first course definitely established for the training of teachers of business subjects was given by Drexel Institute of Philadelphia in 1898. During the next twenty-five years, only thirty-seven schools started courses for "commercial" teachers. In 1928 a questionnaire sent to administrators in 470 institutions revealed that in sixty-six schools, or 14 per cent, courses for the training of

teachers of business subjects were offered. In 1929, a search through 635 catalogues of degree-granting institutions revealed that in 138 institutions, or 20.1 per cent of the total number, courses in business-teacher education were provided. A search through the literature of the field fails to reveal any investigations of business-teacher education made prior to 1922.⁷

Hoadley's study⁸ of the status of commercial teacher training in the United States in 1929 yielded the following findings:

Seventy-four of the 89 institutions having commercial teacher training at that time required the students to have at least a high school education before they were accepted as candidates for degrees.

The subjects most frequently required were: English, psychology, law, bookkeeping or accounting, methods, shorthand, typewriting, economics, principles of education, and mathematics.

Practice teaching was offered by 72 of the institutions. It was required most frequently in shorthand, typewriting, bookkeeping, law, and business arithmetic. Practice teaching was supervised by the room teacher, by the methods teacher, or both.

About half of the institutions required or recommended business experience, although only a little more than one-third of these gave credit for it.

Sixty-five of the institutions had a placement bureau for helping students obtain positions. Forty-one institutions estimated that they filled at least half of their calls for commercial teachers. An insufficient number of graduates was reported as the chief reason for not filling all such calls.

Curricular requirements of state university programs and certification requirements in general were studied by Tarkington⁹ in 1938.

⁷Graham, op. cit., pages 29-30.

⁸Hoadley, op. cit., pages 9, 10.

⁹Tarkington, op. cit., pages 17-23, 28, 29.

His findings are cited here in tabular form to show the status of North Carolina in relation to other states. The parenthetical numbers in the last column show the revised figure for North Carolina as of 1941.

Requirements	Range	Average	N. C.
For Degree			
Total hours	120 - 150	125.4	120
Professional hours	17.3- 31	21.6	18
Content hours	18 - 69	46.5	36 (30)
For Certificate			
Professional hours	8 - 21	17.1	18
Content hours	12 - 40	25.8	36 (30)

Requirements in professional and content courses for a university degree in North Carolina were less than the average reported by Tarkington for the 33 state universities in the 29 states, but certification requirements were greater than the average obtained for the 29 states.

O'Briant¹⁰ reported a study in 1940 of the status of business education in the institutions with chapters of Pi Omega Pi. Her findings were as follows:

Shorthand, typewriting, economics, and accounting were the courses most generally offered by the institutions; there was a wide variation in the other business education courses offered.

From 120 to 138 hours were required for graduation, and from 24 to 69 credit hours were required in business subjects. The only professional course consistently required was methods in teaching business subjects.

There was little uniformity in the plans for observation and practice teaching.

¹⁰O'Briant, op. cit., pages 9, 10.

Most of the colleges required a second teaching field. Only 25 per cent provided opportunity for business experience.

About 50 per cent had inadequate professional library facilities.

A large proportion of the instructors held Master's degrees, and a majority had had business experience.

Harman, reporting in 1940 on professional preparation and experience of business teachers in the schools of North Carolina, commented that they are "comparatively well trained":

In view of the fact that teacher training on the college level for business teachers has been offered in the State only for the last ten years, business teachers are comparatively well trained. All the teachers who replied to the questionnaire (177 out of 262) had high school class "A" certificates. Ninety-three per cent of them had degrees, 5.3 per cent had Master's degrees, and 7 per cent had two Bachelor's degrees. . . . Slightly more than one-half of the teachers received their training in North Carolina. . . . A much larger percentage of the teachers who have been teaching one or two years received their training in North Carolina, while of those who have been teaching 10 or 15 years, only 21.1 per cent received their training in North Carolina.

. . . The average experience of teachers in teaching business subjects was 5.7 years. . . . The teachers in the larger schools were found to have more actual office experience than those of the smaller schools. Of the 177 teachers replying to the questionnaire, 112 or 63.3 per cent had had some business experience.¹¹

¹¹Harman, op. cit., pages 108-109.

CHAPTER II

GROWTH AND DEVELOPMENT OF THE COLLEGES IN NORTH CAROLINA OFFERING BUSINESS TEACHER TRAINING TO WHITE STUDENTS

A brief sketch of each of the colleges concerned in this study is presented here to show the growth and development of the institutions, with particular reference to the business teacher-training program. The accredited standing of these institutions in various accrediting associations is given in Table II; Table III shows the year of establishment of business teacher-training courses, and the departments responsible for the work in each of the colleges; and the accompanying map shows graphically their geographical placement.

The Woman's College of the University of North Carolina is located in Greensboro. It opened its doors on October 5, 1892, as the State Normal and Industrial School--the direct result of a campaign made by Charles Duncan McIver in behalf of education for women. The first annual catalogue states:

The purpose for which the Institution was created is very clearly stated in Section 5 of the Act establishing it. It is as follows:

"Section 5. The objects of the Institution shall be (1) to give to young women such education as shall fit them for teaching; (2) to give instruction to young women in drawing, telegraphy, typewriting, stenography, and such other industrial arts as may be suitable to their sex and conducive to their support and usefulness. . . ."

The course of study has been arranged with a view of meeting the needs of the young women of North Carolina, and embraces: (1) The Normal Department, (2) The Business Department, (3) The Domestic Science Department.¹

¹First Annual Catalogue of the State Normal and Industrial College, Greensboro, North Carolina, 1892-93, pages 17-18.

TABLE II
ACCREDITED STANDING OF TEACHER-TRAINING INSTITUTIONS IN
NORTH CAROLINA IN 1940

MEMBER OF	WC	C	ECT	E	HP	LR	Q	WCT
American Association of Teachers Colleges			x					x
American Association of University Women	x							
American Council on Education	x							x
Association of American Colleges	x	x		x	x	x		
North Carolina College Conference	x	x	x	x	x	x	x	x
National Association of Business Teacher-Training Institutions	x							
National Conference of Church-related Colleges		x						
Presbyterian Educational Association of the South							x	
Southern Association of Colleges and Secondary Schools	x	x	x			x	x	
Southern Association of Colleges for Women	x						x	
Association of American Universities	x							
Registry of United States Government for Reception of Foreign Students						x		

Abbreviations used for colleges:

WC Woman's College of U. N. C.
C Catawba College
ECT East Carolina Teachers College
E Elon College

HP High Point College
LR Lenoir Rhyne College
Q Queens College
WCT Western Carolina Teachers College

TABLE III

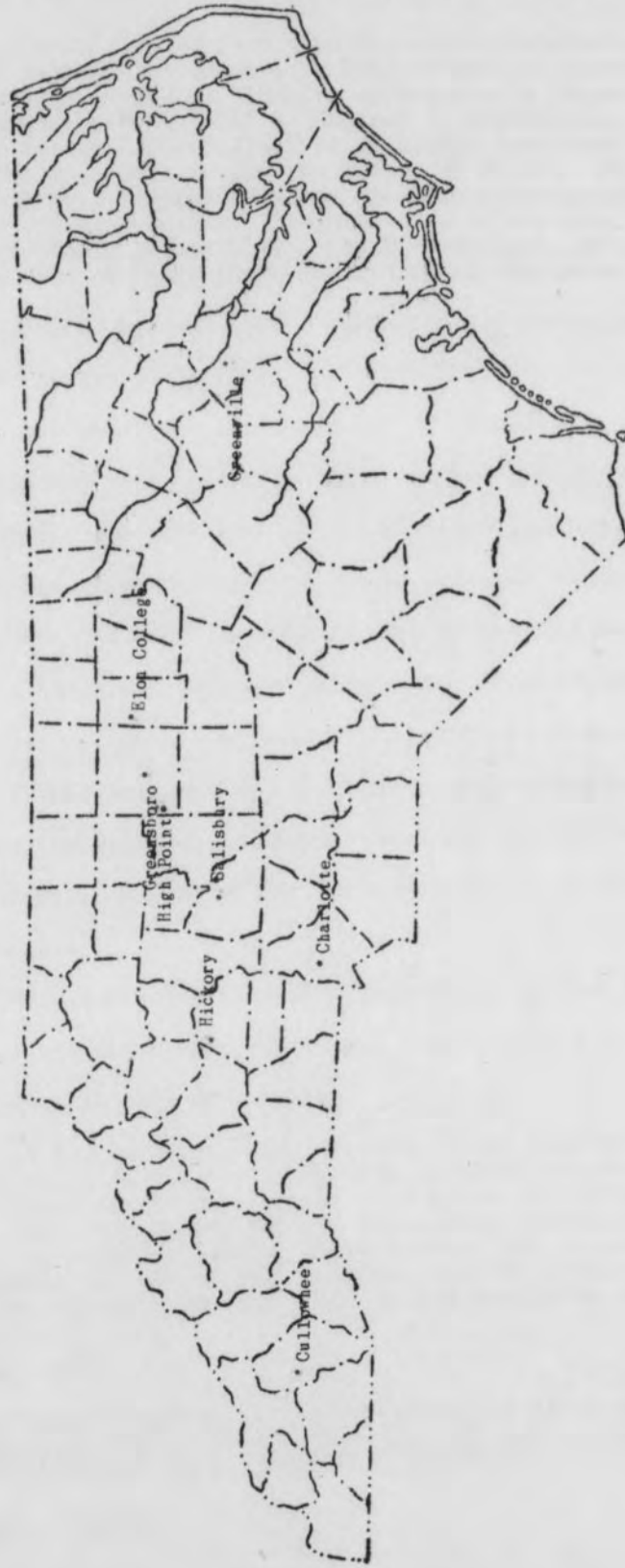
YEAR OF ESTABLISHMENT OF BUSINESS TEACHER-TRAINING COURSES AND
DEPARTMENTS RESPONSIBLE FOR THE WORK IN EACH OF THE COLLEGES

COLLEGE	DATE	DEPARTMENT
Woman's College of the University of North Carolina	1932	Secretarial Science, Economics
Catawba College	1935	Commerce, Secretarial Science
East Carolina State Teachers College	1936	Business Education
Elon College		Education, Business Education
High Point College	1933	Education, Commerce
Lenoir Rhyne College	1934	Education, Commerce
Queens College	1938	Education, Commerce
Western Carolina Teachers College	1935	Business Education

In 1919 the name was changed to the North Carolina College for Women. In 1931, by an act passed by the General Assembly, it became a part of the Consolidated University of North Carolina and its name was changed on July 1, 1932, to The Woman's College of the University of North Carolina.

Beginning with a student body of 223 and a faculty of 15 in 1892-93, it had grown until in the regular session of 1939-40, its students numbered 2,261 and its faculty numbered 225. At that time the college was coeducational during the summer session only.

In 1940 the college had grown and expanded far beyond its simple beginning. This is apparent from the following paragraph which is quoted from the catalogue of that year:



NORTH CAROLINA

SCALE OF MILES



Location of Eight of the Colleges Offering Business Teacher Training in 1940

The College confers five degrees: Bachelor of Arts, Bachelor of Science in Home Economics, Bachelor of Science in Music, Bachelor of Science in Physical Education, and Bachelor of Science in Secretarial Administration. The College is organized into the Liberal Arts College and the School of Music. The Liberal Arts College consists of the following divisions and departments: Languages and Literature, Social Studies, Mathematics and Pure Science, Art, Secretarial Science, Home Economics and Education.²

No explanations were made of the terms divisions and departments used in the paragraph quoted.

No record was found of the number of students enrolled in commerce in the beginning year of the college, but the catalogue for that year reported that 5 certificates in commerce were granted.³ In 1939-40 there were 148 students enrolled in the one-year commercial course. From a one-teacher staff in 1892-93, the commercial department staff expanded to include 4 teachers in 1939-40. This department is separate from the department of business education and secretarial administration established in 1932 to offer four-year degree courses for secretaries and business teachers, and later authorized to offer advanced courses as a part of the graduate program of the University of North Carolina.

The following quotations from an article by Miss Patty Spruill, a member of the department staff, and from Harmon's study describe the beginnings of this department:

At the January, 1932, meeting of the Faculty Council of Woman's College it was decided to offer training leading to the degree of Bachelor of Science in Commerce. At that time, the market for our graduates, largely in teaching, was rapidly becoming oversupplied, and it was thought advisable to open up new opportunities for placement. Another reason which had considerable weight in this new

²The Woman's College of the University of North Carolina, Bulletin, Catalogue Issue for the Year 1939-40, Announcements for 1940-41, Greensboro, North Carolina, page 30.

³Ibid., page 52.

departure from traditional courses was the fact that the high schools of the state were employing about one hundred teachers of business subjects, and there was not a single institution of higher learning in the state providing training for them.⁴

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In 1932-33 a four-year course in secretarial training was offered (at the Woman's College of the University of North Carolina), which also met the certification requirements for business teachers.

The offerings in this field together with those in economics are designed to provide the principal content courses for the students preparing to teach commercial subjects in the high schools, and to train young women for positions in the business world.

That very definite need had been met, may be attested by these figures taken from the catalogues of the college which gives the number of graduates who have received the degree of Bachelor of Science in Secretarial Administration for the following years: 1933-4, 1934-12, 1935-25, 1936-40, 1940-103.⁵

Tabulations compiled by Miss Spruill show that in 1932-33 there were 40 students enrolled in the senior, junior, and sophomore classes in secretarial science. Of these, 4 were in the senior class, 12 were in the junior class, and 24 were in the sophomore class. No distinction was made in the sophomore class between secretarial and business teacher-training students. Two of the seniors and 9 of the juniors were classed as business teacher-training students.

The secretarial science enrollment in 1939-40, according to data obtained from the questionnaire returns in the present study was 321 students distributed as follows: 105 seniors, 101 juniors, 115 sophomores. Of these, 70 seniors, 70 juniors, and 75 sophomores

⁴An unpublished article prepared by Patty Spruill on the "History of the Department of Business Education of The Woman's College of the University of North Carolina," page 1.

⁵Clay Harman, "The Development and Status of Business Education in North Carolina." Unpublished Master's thesis, University of North Carolina, Chapel Hill, N. C., 1940.

(representing 67 per cent of the total number), were enrolled for business teacher training.

In 1932-33 there were 2 teachers in the secretarial science department; in 1939-40, there were 7.

Graduate work in business teacher training was offered first during the summer of 1937, with 1 teacher and 3 graduate students, according to a report filed in the registrar's office. In the summer session of 1940, there were 13 students enrolled in graduate business teacher-training classes. To instruct these there were 3 teachers.

The degree of Master of Science in Business Education was conferred for graduate work. Candidates for the degree normally took part of their work, especially in the content courses, at the University of North Carolina at Chapel Hill. The advanced degree was conferred by the Graduate School of the University of North Carolina.

East Carolina Teachers College. The General Assembly of North Carolina passed an act on March 8, 1907, authorizing the establishment of East Carolina Teachers College at Greenville for the purpose of training young men and women to teach in the public schools of North Carolina. Only one-year and two-year curricula were offered from the time it opened in 1909 to 1920, when it was authorized to offer a four-year curriculum and to grant the Bachelor's degree. In 1929 the college was authorized to grant the Master of Arts degree.

In carrying out the aim of the college the following curricula of instruction were offered in 1939-40: a four-year curriculum leading to the Bachelor of Arts degree for those expecting to be primary teachers, grammar grade teachers, high school teachers, principals, and supervisors of elementary schools; and graduate work leading to the Master of Arts degree. The catalogue does not specify in what fields the graduate work was offered, but through inquiry it was

found that graduate work in business education was not offered.

Enrollment in the regular session increased from 174 in 1909-10 to 1,289 in 1939-40. The number of members on the college faculty for this first year was 13; in 1939-40, there were 92.

Business teacher-training classes were begun in 1936. Figures were not obtainable for the student enrollment at that time but the business faculty numbered 2. In 1939-40, there were enrolled in the teacher-training department 107 students who were taught by 4 teacher-training faculty members. Of the number enrolled in that year, 26 were seniors, 27 were juniors, and 54 were sophomores. The business education program in the college at that time is described in the following paragraphs:

It is not the purpose of the Department to offer a business course that compares with short courses offered in schools other than four-year colleges. Although the Department is primarily interested in the training of business teachers, a large number of students are enrolled who have for their purpose the pursuit of certain courses until such skill and knowledge are gained as will permit the student to qualify for an office position. The length of time required to achieve this end depends upon the previous business training and the native ability of the student. Under most circumstances, however, no student will be recommended for office work until he has completed two years of college work which has included specific courses in the fields of Business Education and English. No diploma is granted if the student leaves school before meeting the requirements for a degree.

. . . All credits earned count toward a college degree. . . .

Since the primary purpose of the Department is to train business teachers, all graduates of the Department of Business Education are certified to teach all business subjects offered in the high schools of North Carolina.⁶

⁶East Carolina Teachers College Bulletin, Departmental Objectives, Greenville, North Carolina, 1940, pages 5-6.

Western Carolina Teachers College. This college, located at Cullowhee, has been described as "the only state teachers college in America right out in the open country."⁷ It grew out of a local high school which resembled a boarding school. Students came to it from surrounding communities and from neighboring counties. The official date of the beginning of the school was set as the autumn of 1889, although there was no state appropriation until 1893. It was called Cullowhee State Normal School and offered two years of college work. The legislature in 1929 changed the name again, to Western Carolina Teachers College, and authorized it to grant degrees. The charter specifies that "the primary purpose of the college shall be the training of teachers for the public schools of North Carolina."⁸ The college is coeducational.

Four-year curricula leading to the Bachelor of Science degree for primary, grammar grade, and high school teachers are offered. The following college departments are reported in the February 1940 catalogue: Business Education, English, Mathematics, Modern Languages, Physical Education and Health, Education and Psychology, Science, and Social Science. In addition to these departments there is a Division of Arts embracing a group of practical and fine arts subjects which are not included in the offerings of the various departments. These subjects are public school art, industrial arts, home economics, music, library science, and writing.

⁷Bulletin, Western Carolina Teachers College, Catalogue Number With Announcements for 1940-41, Cullowhee, North Carolina, February 1940, page 11.

⁸Ibid., page 12.

In 1924-25, there were 162 students enrolled in the regular session; in 1939-40, there were 735. The college faculty numbered 35 in 1939-40. Figures for the faculty of 1924-25 were not obtainable.

Little could be learned from any of the sources concerning a business department as distinct from the business teacher-training department. In 1939-40, 104 students were reported on the questionnaire as being enrolled in business classes which were not concerned with teacher training. The business education curriculum set up in the catalogue was restricted to the training of high school teachers.

Business teacher-training courses were started in January, 1935. Again no figures were obtainable for the enrollment or for the business faculty members in that year. In 1939-40, 2 teachers taught the 29 students enrolled in this department. The class distribution was reported as follows: 23 were seniors, 4 were juniors, and 2 were sophomores.

Catawba College. To meet the need of a school for "training in liberal arts under religious influence,"⁹ Catawba College was opened by the Reformed Church on December 3, 1851, in the "Old Academy Building" in Newton. In 1852 it was chartered by the state legislature and given the right to confer degrees. Men only were admitted until 1880. Since that time the college has been coeducational.

The college was relocated at Salisbury in 1922-23. The aim of the college was the complete development of the individual--intellectually, physically, vocationally, socially, civically, culturally, and religiously. Graduates in the departments of Business Administration,

⁹Catawba College Bulletin, The Catalogue Issue, 1939-40, Salisbury, North Carolina, April 1940, page 18.

Home Economics, and Music are granted the Bachelor of Science degree; graduates in Language and Literature; Philosophy, Religion and Education; Social Sciences; Science; and Fine Arts receive the Bachelor of Arts degree.

The enrollment in 1851 was given as 400 in a letter received from the head of the business department of the college. This figure seems high in comparison with an enrollment of 519 in 1939-40. Information concerning the faculty for 1851 was not obtainable; for 1939-40 it was 37.

Business work was begun in 1925 with an enrollment of 125 students taught by 2 teachers. The following comment was made in response to a letter of inquiry sent to the college in 1944: "Sorry that I do not have a history of the department. However, the one-year secretarial work was started in 1929 and in 1932 we added another year. Next year we plan to offer three years of shorthand."¹⁰ These business classes were taught by the 2 teachers who had charge of the business teacher-training classes.

The teacher-training work was begun in 1935. No figures were obtainable concerning the student teacher-training enrollment or faculty members in that year. In 1939-40, 13 students were enrolled: 6 were seniors, 4 were juniors, and 3 were sophomores.

Elon College. Elon College, located in the town of Elon College, was chartered in March, 1889. It "is a church institution, supported by the Congregational-Christian Church for the specific purpose of training young men and women under moral and religious influences."¹⁰

¹⁰The Bulletin of Elon College, Fifty-first Annual Announcement, 1940-41, and Catalogue of 1939-40, Elon College, North Carolina, page 11.

The 1940 catalogue stated, "Modestly, but with determination, the college is working toward a modern curriculum for education at the college level, a curriculum which will best serve youth in our complex world."¹¹

At the time of this investigation, the college conferred the degree of Bachelor of Arts. The departments listed in the catalogue were: Biology, Business Administration, Chemistry, Education, English, History, Home Economics, Mathematics, Modern Languages, Music, Philosophy and Religion, Physical Education, Physics, Psychology, Sociology, Greek, Geography and Geology, and Art.

A note on the questionnaire returned in October, 1940, stated:

We have a special one-year course known as secretarial with an average annual enrollment of approximately 60. Secretarial students who attend four years, including prospective commercial teachers, major in Business Administration. Advanced secretarial work is required only of those planning to teach, consequently these classes are small.

In returning the letter of inquiry concerning enrollments, W. W. Howell of the Department of Business Administration reported:

Our statistical data for the regular college students (4-year) are broken down by classes rather than departments, consequently the only accurate way to answer your questionnaire in full would be by going through the individual student records in the registrar's office for the years mentioned.

According to catalogs on file such subjects as book-keeping, typewriting, and shorthand were offered at Elon as early as 1893. However, courses in business administration with collegiate credit were not offered until 1926.

Being situated as we are near the Woman's College and having a greater demand from students for vocational training, we have not emphasized the training of commercial teachers. In conjunction with the College's department of education, we offer sufficient teacher training

¹¹Ibid., page 21.

courses to enable the student to qualify for a teacher's certificate, but limit the candidates to those whom we feel are well qualified.

Figures for the college enrollment and faculty members in the regular session in 1889 were not obtainable; in 1939-40 there were 625 students and 34 faculty members.

The members of the faculty in the business department increased from 1 in 1926 to 4 in 1939-40. These taught all the business courses offered in the curriculum. The enrollment in the four-year classes, exclusive of the teacher-training students, was reported as 75 in 1939-40.

Business teacher training was begun with 2 teachers. The student enrollment for the beginning year was not obtainable. In 1939-40 there were 14 enrolled: 5 were seniors, 7 were juniors, and 2 were sophomores.

High Point College.

High Point College had its origin with the Methodist Protestant Church in North Carolina. It is now under the sponsorship of the Methodist Church. A local board of trustees holds title to the properties and directs the operations of the institution.

The late Rev. J. F. McCulloch, D.D., a native of Guilford County and a graduate of Adrian College, Michigan, became imbued with the idea of a college, related to the Methodist Protestant Church, in the State, and promoted that idea throughout the conference district.

After many years of effort to instill his idea in the church constituency, the annual conference in 1920 voted to go forward with the project. This action was largely inspired by a conditional legacy in the will of a layman, Mr. J. C. Roberts of Kernersville, to the amount of ten thousand dollars. This gift never materialized because of a time limitation and the fund was invested to educate young men for the ministry.¹²

The college opened its doors on September 15, 1924, in the city of High Point as a coeducational institution. At the time of this

¹²High Point College Bulletin, Catalogue Number 1940-41, Announcements for 1940-41, High Point, North Carolina, page 9.

investigation the degree of Bachelor of Arts is conferred. Included in its departments were: Ancient Languages, Art, Biology and Geography, Business Administration, Chemistry, Chemical Engineering, Education and Psychology, English, History, Home Economics, Mathematics, Modern Languages, Music, Health and Physical Education, Religion, Philosophy, and Sociology.

The college enrollment in 1924 was 132; in 1939-40, 481. The number of faculty members in 1924 was 13; in 1939-40, it was 31.

Business classes were begun in 1927 with 2 teachers. In response to an inquiry concerning enrollments, the chairman of the department reported:

The catalogues do not separate students by departments. As a result, it is impossible to separate business students and business education students.

We do not require our students to elect a field of specialization within the business department until the beginning of the junior year. During the junior and senior years they have about thirty hours of electives. Usually they choose some of the elective hours from the field of education. Some of them, realizing that they need just a few more hours to qualify for a certificate may do so.

The college does not cater to the training of business teachers and many who are so trained take jobs in business due to the salary differences between business and teaching.

Business teacher training was begun in 1933. The only figure obtainable for the department was that the faculty numbered 5 in 1939-40. The 5 teachers taught all the business classes offered by the college.

Lenoir Rhyme College. Lenoir College was opened in Hickory in September, 1891. The campus was the gift of Captain Walter Lenoir, in whose honor the college was named. In 1923 the name was changed to Lenoir Rhyme College in honor of D. E. Rhyme, who had given

large sums of money for its advancement. The following excerpt is from the college catalogue:

Lenoir Rhyne College is owned and operated by the United Evangelical Lutheran Synod of North Carolina.

It offers to young men and women a broad, liberal education under Christian influences. It provides standard educational advantages of College grade in the following fields: General Liberal Arts, Fine Arts (Music), Teacher Training in the Primary, Grammar Grade, and High School fields, and Pre-Professional courses.

Degrees

Lenoir Rhyne College grants the degrees of A. B. and B. S.¹³

Business courses were begun in 1924 with 14 students and 1 teacher. In 1939-40, there were enrolled in the one- and two-year courses, 82 students who were taught by the 5 business teacher-training faculty members.

Teacher training in business education was begun in 1934 with an enrollment of 6 students and 2 faculty members. In 1939-40, the enrollment had increased to 33, and the faculty members to 5. Of the 33 enrolled in the teacher-training classes, 8 were seniors, 9 were juniors, and 18 were sophomores.

Queens College. "In 1857 a group of Christian leaders established in Charlotte, North Carolina, the Charlotte Female Institute to provide for educating young women."¹⁴ In 1901 the college came under the control of the Presbyterian Church and was called the Presbyterian College for Women until 1912, when the name was changed to Queens College.

¹³The Bulletin of Lenoir Rhyne College, Catalogue Number 1940, Lenoir Rhyne College, Hickory, North Carolina, page 3.

¹⁴Queens College Bulletin, Catalogue Number 1939-40, Announcements 1940-41, Charlotte, North Carolina, page 17.

In 1930 Chicora College of Greenville, South Carolina, was merged with Queens College.

The purpose of the college is stated as follows in the catalogue:

Queens College purposes to send into our nation to strengthen our civilization and to lead new generations, a continually flowing procession of educated women, with intellects trained to think, with personalities graced with cultured charm, and with lives motivated by Christian principles and loyalty.¹⁵

Graduates in Home Economics, Nursing, Laboratory Technician, Music, Secretarial Administration, and Art receive the degree of Bachelor of Science, and graduates in the General, Public School Teaching, Presocial work, and Premedical courses receive the degree of Bachelor of Arts. Women only are admitted as students.

No enrollment record for 1857 was obtainable from the college. However, the enrollment for 1861 was reported by the head of the business department, in response to a letter of inquiry, as about 135, and the faculty members as 10 or 11. The enrollment had increased in 1939-40 to 414, and the faculty to 37.

Business courses were begun in 1933-34 with an enrollment of 35 students taught by 1 teacher. In 1939-40, the enrollment in the one-year and four-year business courses had increased to 68, and the faculty to 3.

Business teacher training was begun in 1938, at which time 9 students were taught by 1 full-time teacher and one half-time teacher. In 1939-40, the enrollment in this department was 14. Of this number 6 were seniors, 3 were juniors, and 5 were sophomores. The same teachers taught all the business classes.

¹⁵Ibid., page 16.

Summary

Some of the colleges considered in this study are very old, two of them having been organized before the Civil War. Four of the five denominational institutions were educating young people before the state schools were organized.

Courses in business were included in two college curricula as early as 1892 and 1893, but it was not until 1932 that business teacher training was begun. The first such training was offered at The Woman's College of the University of North Carolina. By 1938, five denominational institutions and two state teachers colleges were offering similar instruction. The known enrollments were small in the initial years, but in 1940, The Woman's College had 215 students registered for the work. Catawba College, the oldest of the eight institutions offering business teacher-training had only 13 enrolled at the time of this investigation. At least six of the colleges had courses in business in addition to the teacher training.

The time of organization of the teacher-training course does not seem to have been an important factor in the growth of the department. The enrollments in the departments in the eastern and western sections of the state increased more than those in the smaller colleges in the central part of the state--the reason being possibly the one stated by Howell of Elon College; that is, the proximity of the colleges to The Woman's College. In 1940 the business teacher-training enrollments ranged from 13 to 215 in comparison with the collegiate enrollments ranging from 414 to 2,261.

Six of the colleges are coeducational; one is exclusively for women students; and one admits only women to the undergraduate classes, but has a coeducational program of offerings as part of the Graduate School of the University of North Carolina.

CHAPTER III

CURRICULAR REQUIREMENTS AND OFFERINGS

In the preceding chapter, the departmental organization of the different colleges was given. It is the purpose of this chapter to examine the requirements and offerings of the colleges with respect to the general academic, specialized, and professional courses in the business-teacher training program required for an undergraduate degree. Table IV lists the general academic requirements:

The following terms are defined here as they are used in this study:

Semester hour--A semester hour credit corresponds to one lecture period of approximately one hour per week for eighteen weeks, or from two to three hour laboratory periods a week for eighteen weeks.

Quarter hour--A quarter hour credit corresponds to one lecture period of approximately one hour per week for twelve weeks, or from two to three laboratory periods a week for twelve weeks. One quarter hour is valued at two-thirds semester hour.

Bookkeeping--The term generally used in high school; accounting, the term generally used in college.

Stenography--Correlated work including shorthand and typewriting.

Secretarial science--Courses relating to the work of a secretary such as, typewriting, shorthand, office machines, and office practice are included in the term secretarial science.

Specialized--Courses in secretarial science, in other business subject matter, and in the closely related field of economics are included in the term specialized.

TABLE IV
GENERAL ACADEMIC REQUIREMENTS FOR DEGREE

Subject	Semester Hours							
	WC	C	ECT ^a	E	HP	LR	Q	WCT
English	12	12	8-10	12	12	12	12	16
History	6	6	4- 6		6	15	9	6
History and Social Science				15				
History and Geography	6							
Foreign Language	6-12	6		12	12	6	12	
Mathematics			2- 4			6		2
Mathematics or Science	6			12-14				
Science			4- 6		6-8	8	8	
Sociology			0- 4					2
Government			2					
Hygiene	3	2						2
Physical Education	2	6	0- 4	6	6			2- 2/3
Geography			2					4
Religious Studies				6	6	7	12	

Abbreviations used for colleges:

WC	Woman's College of U. N. C.	HP	High Point College
C	Catawba College	LR	Lenoir Rhyne College
ECT	East Carolina Teachers College	Q	Queens College
E	Elon College	WCT	Western Carolina Teachers College

^aEast Carolina Teachers College provides eight outlined courses with commerce as one of the two majors. The hours given do not include those of subject when it is the second major.

Professional--Courses in education and psychology are included in professional courses.

General academic--Courses not included in the professional and specialized fields are considered as general academic--sometimes referred to as general cultural.

For seven of the colleges, Table V lists the courses required in the freshman year, Table VI the courses required in the sophomore year, and Table VII the courses required on the junior-senior level. The organization of the business curriculum at East Carolina Teachers College does not fit into the outline being used in Tables V-VII; a discussion of it will be found on pages 38-39.

General Academic Requirements

A study of the catalogues revealed that in four of the colleges all the required subjects in the freshman year were academic. Only two colleges required as much as twelve hours of work in the field of business on that level. In the sophomore year, the required work was again predominantly in the academic field, with from six to fourteen hours required in business. Specialization in all colleges was deferred until the junior and senior years.

A study of Tables IV-VII reveals that the institutions were generally uniform in the number of hours of English required of business students, as well as generally uniform in the subject matter required in English in the freshman and sophomore years. Seven colleges required composition work in the freshman year. Elon College differed by requiring a course in orientation in regional and American culture with oral and written reports. In five colleges the work in composition was followed by a survey of English literature in the sophomore year. Four of the eight colleges did not require English in the

TABLE V
FRESHMAN REQUIREMENTS FOR BUSINESS STUDENTS

Subjects	Semester Hours						
	WC	C	E	HP	LR	Q	WCT
SECRETARIAL SCIENCE AND BUSINESS ADMINISTRATION							
Business Organization and Practice			3				
Introduction to Business				3			
Introductory Business Problems							2
Retail Organization and Management				3			
Economic Geography				3			
Economic History		3		3			
Economic Resources		3	3				
Principles of Economics			6				
Typewriting							6
ENGLISH							
Composition							6
English Composition				6			
Freshman English--an ori- entation in regional and American culture			6				
Rhetoric and Composition	6	6			6		
Theory and Practice in Composition						6	
FOREIGN LANGUAGE	6 ^a			6	6		
French or German			6				
Modern Language		6				6	
GEOGRAPHY							
Economic Geography							4
HISTORY							
American							6
Foundations of Modern History					6		
History of Modern Europe						6	
Modern European Civiliza- tion	6						
Modern European History		6					
The Establishment and De- velopment of the Ameri- can Nation			6				
MATHEMATICS					6		

^aIf only one year of foreign language is taken, the one offered for entrance must be continued.

TABLE V (Continued)
FRESHMAN REQUIREMENTS FOR BUSINESS STUDENTS

Subjects	Semester Hours						
	WC	C	E	HP	LR	Q	WCT
PERSONAL HYGIENE Hygiene	3	2					
PHYSICAL EDUCATION	1	3	4	2		0 ^b	0 ^b
RELIGIOUS STUDIES Bible					2	6	
SCIENCE Laboratory Science Science or Mathematics	6			6-8	8	8	
WRITING							0 ^b

^bRequired but no credit allowed.

TABLE VI
SOPHOMORE REQUIREMENTS FOR BUSINESS STUDENTS

Subjects	Semester Hours						
	WC	C	E	HP	LR	Q	WCT
SECRETARIAL SCIENCE AND BUSINESS ADMINISTRATION							
Accounting		3			6	6	
Business Management				6			
Economics							4
Economic Problems and Principles			6				
Principles of Accounting	6						
Public Finance or Labor Problems		3		3			
Salesmanship							8
Stenography	2						
Typewriting							2
Mathematics of Business							
ECONOMICS							
Economic Problems and Principles					3	3	
Principles of Economics	6	6			3	3	

TABLE VI (Continued)
SOPHOMORE REQUIREMENTS FOR BUSINESS STUDENTS

Subjects	Semester Hours						
	WC	C	E	HP	LR	Q	WCT
ENGLISH		6					
Fundamentals of English Composition				3			
History of English Literature					6		
Literature and Composition	6						
Sophomore English--extensive, individualized with reading program with discussions			6				
Survey of English literature						6	6
FOREIGN LANGUAGE				6	6		
Foreign Language or Elective	6 ^a						
German or French			6				
Modern Language						6	
HISTORY							
American Geography and U. S. History since 1865	6			3			
Political Science				3			
MATHEMATICS OR SCIENCE			6-8				
Mathematics of Business							2
MINOR OR GENERAL ELECTIVE		b					
PHYSICAL EDUCATION	1	3	2	2		0 ^c	0 ^c
PSYCHOLOGY							
Educational							2
General Psychology				6	4		2
Introductory		2				3	
Mental Hygiene						3	
Psychology of Learning							2
RELIGIOUS STUDIES							
Bible					2	6	
Survey of the Bible			6				

^aIf only one year of foreign language is taken, the one offered for entrance must be continued.

^bMust include second year of modern language.

^cRequired but no credit allowed.

TABLE VII

JUNIOR AND SENIOR REQUIREMENTS FOR BUSINESS STUDENTS

Subjects	Semester Hours						
	WC	C ^a	E	HP	LR	Q	WCT
ECONOMICS							
Economic Geography						3	
Labor Problems					3		
Money and Banking					3		
EDUCATION							
Directed Teaching					3		
Education Electives	6		b	b	6	3	
General Conference Period							2/3
Materials and Methods in Shorthand, Typewriting, and Bookkeeping or							
Methods in Social Business Subjects	3						
Methods in Specific Subject					3		
Methods of Teaching Commercial Subjects						3	
Observation and Supervised Teaching in High School					3		5-1/3
Practice Teaching						3	
Principles of Secondary Education						3	
Problems in Secondary Education							2
Secondary Education or Methods and Management					3		
Teaching Business Education in High School							2
Teaching Under Supervision	3						
Technique of Teaching in High School	3						
Tests and Measurements in High School							2

^aCatawba College Bulletin, April 1940, page 63: "In the junior and senior years, Bookkeeping and Principles of Accounting and Psychology 31 must be taken and additional courses in business administration and economics to meet the requirements for the degree. The remaining courses are elective. Students who take this course with the expectation of teaching must select their electives to meet the requirements for the teachers' certificate."

^bElectives must be chosen that meet state certification requirements.

TABLE VII (Continued)

JUNIOR AND SENIOR REQUIREMENTS FOR BUSINESS STUDENTS

Subjects	Semester Hours						
	WC	C	E	HP	LR	Q	WCT
ENGLISH							
Speech				3			
Business English					3 ^c		
Reading and Speech							2
GEOGRAPHY							
Economic and Commercial					2 ^c		
HISTORY							
American Government and Politics			3				
American History					6		
Government					3		
History 4b (International Relations)						3	
Social Science			6				
HYGIENE--Personal							2
PHYSICAL EDUCATION				2		0	
Health of Physical Ed.							4
MATHEMATICS <u>OR</u> SCIENCE			6				
PSYCHOLOGY							
Educational	3		d	d	3	3	
General	3	3					
Psychology of Adolescence or H. E. Elective or Minor Elective							2
Psychology of Childhood and Adolescence						3	
Psychology <u>or</u> H. E. Elective							2
SECRETARIAL SCIENCE AND BUSINESS ADMINISTRATION							
Accounting					6		8
Bookkeeping and Principles of Accounting		8			3		
Business Administration				3			
Business Law							2
Business Correspondence							

^cCounted as business credit.^dElectives must be chosen that meet state certification requirements.

TABLE VII (Continued)

JUNIOR AND SENIOR REQUIREMENTS FOR BUSINESS STUDENTS

Subjects	Semester Hours						
	WC	C	E	HP	LR	Q	WCT
SECRETARIAL SCIENCE AND BUSINESS ADMINISTRATION (Continued)							
Business Organization and Management				3			
Corporation Finance, Money and Banking; Life Insur- ance, Labor Problems; or Cost Accounting, Audit- ing			12				
Insurance--General Course				3			
Management and Practice					3		
Marketing				3			
Marketing, Merchandising, Business Law or Advanced Accounting			6				
Money and Banking				3			
Office and Secretarial Practice							2
Office Machines	3						
Office Management and Practice	3		e			3	
Office Practice					3	3	
Proficiency in Shorthand and Typewriting			6 ^f	10	6		
Public Finance				3			
Shorthand--beginning	8				6	6	
--advanced	4					5	
Typewriting--beginning						4	
--advanced	2						
Transportation--general course				3			
Required Electives	8				3	9	2
RELIGIOUS EDUCATION				6	3		
SOCIOLOGY							2

^eRequired but no credit given.

^fBusiness 13, 14 and 15, 16 taken together by a Junior or Senior majoring in Business Administration may count for six semester-hours, but this credit will not be certified on the student's record until all other semester-hour requirements are completed. This 6 hours is in addition to the 36 hours required in the course outlined for business administration.

junior and senior years. When required, the courses were in speech, grammar, and business English.

Foreign language was regularly required in six of the colleges, twelve semester hours being specified in three catalogues. Western Carolina Teachers College did not require any credits in it but stated on page 44 of its February, 1940, Bulletin that "One year of modern language is recommended for those who expect later to do graduate work."

In one of the outlined commerce courses entitled "Commerce and French," at East Carolina Teachers College, forty-two quarter hours¹ of French were required but no foreign language was required in any of the other seven commerce courses outlined in detail in the catalogue.

Three colleges required mathematics; seven required either mathematics or science. Catawba College was the only one that required neither.

Religious studies were not required in the state colleges and no department of religion was listed in their catalogues. Catawba College had such a department but its offerings were elective.

Credit requirements in physical education ranged from none to six semester hours. Lenoir Rhyne College gave no credit for the course but plays and games were required of all freshmen. Queens College gave no credit, but required physical education in the freshman, sophomore, and junior years. The range in required academic hours was from 34 $\frac{2}{3}$ to 65 semester hours.

¹One quarter hour is equivalent to two-thirds semester hour. The Tables have been equated from quarter hours to semester hours for East Carolina Teachers College and Western Carolina Teachers College.

Specialized Requirements

The specialized business courses required in 1940 by all the colleges were stenography, typewriting, accounting, and office management. These were the specialized business subjects required by the state for certification to teach business subjects in the high schools of North Carolina. A digest of Requirements for High School Teachers Certificates in business subjects is presented in the Appendix.

Other specialized requirements varied widely among the eight colleges, as is shown in Tables V, VI, and VII. Many of the courses seemed to be of a similar nature, with a variation in the names of the courses. For example, the office practice course was variously titled as: office management, office management and office practice, business management, office management and practices, office management and secretarial practice.

The range in the number of hours required in specialized courses was from 36 to 54 semester hours. This wide variation was due largely to the placement in several of the colleges of economics and related subjects under the business department.

Economics was listed as a separate department by The Woman's College and Catawba College. At East Carolina Teachers College the department of economics was grouped with the departments of sociology and government, at Queens, with the department of sociology, and at Lenoir Rhyne, with the business administration department. Elon, High Point, and Western Carolina Teachers College listed courses in economics as business department courses.

Seven of the colleges regularly required courses in economics, the number of hours ranging from 4 to 12. East Carolina Teachers

College required it only when sociology was chosen as the second major.

Professional Requirements

The professional requirements of the colleges were planned to meet the state certification requirements which included, according to the Digest of Requirements for High School Teachers Certificates:

	Semester Hours
Educational Psychology	2
Principles of High School Teaching	
or	
Problems in Secondary Education	2
Materials and Methods in one subject field	2
Observation and Directed Teaching	3
Electives (professional)	9

Tables VI and VII show how The Woman's College, Lenoir Rhyne College, Queens College, and Western Carolina Teachers College conformed to these requirements. The other colleges explained that the students were to choose, as electives, courses which would meet these requirements.

The range of semester hours offered in these required courses were: in educational psychology, principles of high school teaching, problems in secondary education, and materials and methods in one subject field, from 2 to 3; and in directed teaching, from 3 to 6.

Information obtained by questionnaires revealed a wide variation in the requirements with respect to directed teaching. Detailed information concerning this course is presented later in Table XII, page 54, and in the discussion of the Table, page 53.

Offerings in Specialized Subjects

The offerings of the institutions in business subjects were as varied as the requirements. In general, the offerings in the business departments at The Woman's College and at East Carolina Teachers

College included secretarial science courses and professional courses for business teachers. At Queens College and at Lenoir Rhyne College, only secretarial science courses were listed in this department. Some of the additional courses offered in the business department by the other colleges included: economics, marketing, labor, money and banking, investments, merchandising, insurance, buying and budgeting, and statistics.

Courses in economics and related problems were offered at The Woman's College, at East Carolina Teachers College, at Lenoir Rhyne College, and at Queens College but were not listed as business department offerings. Hence the variation was in placement of the courses in the curricula rather than in the offerings.

Salesmanship, marketing, labor problems, and business correspondence were offered by five of the eight institutions; and money and banking, business organization and practice, introduction to business, and office machines by three colleges. Cost accounting, insurance, public finance, business finance, business arithmetic, budgeting and buying, auditing, investments, federal tax accounting, credits and collections, advertising, economic geography, statistics, transportation, business laboratory, merchandising, and retail organization and practice were offered usually by one, and never by more than two of the colleges.

Professional Offerings

Some of the institutions outlined in detail the education requirements for the student; others merely stated that certification requirements were to be met and that the other courses were elective. Seven colleges offered, in addition to the required courses, educational measurements; six colleges offered school organization and classroom

management, and history of education; and four colleges offered philosophy of education. Vocational guidance, mental hygiene, child study, visual aids in education, history of education in the United States, character education, practical school problems, guidance, American public school, highway safety, social interpretations of education, library education, child accounting, contemporary education, story telling, secondary education in the United States, investigations in reading, modern trends in secondary education, history and principles of curriculum making, curriculum, rural school problems, general methods and management, and public education in North Carolina were offered by one, and never by more than three, of the colleges.

In addition to the certification requirement of educational psychology, child psychology was offered by six colleges; social, and abnormal psychology, by five colleges; psychology of adolescence, and applications of psychology were offered by four colleges. One, two, or three of the institutions listed courses in the following: psychology of learning, mental tests and measurements, psychology of personality, advanced educational psychology, exceptional children, elementary experiments in psychology, mental hygiene, systems in psychology, history of psychology, psychology of secondary schools, problems in mental testing, special problems, motivation of behavior, and a coordinating course in psychology.

Because the organization of the business curriculum at East Carolina Teachers College does not fit into the outline being used in this study, it is here given separately.

This institution required its business teacher-training graduates to have a minimum of 190 quarter hours credit, including two majors from the following groups:

Quarter Hours		Quarter Hours	
Commerce	54	and English	42
Commerce	54	and French	42
Commerce	54	and History	42
Commerce	54	and Mathematics	42
Commerce	54	and Music Education	46
Commerce	54	and Physical Education	45
Commerce	54	and Science	42
Commerce	54	and Social Science	54

Each of the definitely outlined courses required twenty-seven quarter hours of education with the exception of Commerce and Mathematics, which required thirty quarter hours.

English, geography, history, mathematics, psychology, and science were required in all the courses, the number of hours varying with the different courses. A foreign language was not required for admission, and was not required in any of the above courses except in the Commerce and French group.

The required cores for these courses ranged from 171 quarter hours to 180 quarter hours, thus leaving from 10 to 19 quarter hours for free electives.

In a pamphlet discussing departmental objectives this explanation is made concerning business education:

Class work is entirely on the college level. Business students are urged to choose a second teaching field and to carry all other required courses in their regular order. The Department does not offer a sufficient number of courses at any one time to permit the student to carry a full schedule of business classes to the exclusion of all other college offerings.

The Business Education curriculum is comprised of three general divisions: (1) the core curriculum of courses in the major fields of human endeavor such as English, Science, Mathematics, History, Social Sciences, and Geography; (2) the business curriculum of courses in

Accounting, Shorthand, Typewriting, Office Practice, Business Law, and elective subjects; (3) the professional curriculum of courses in the general field of education, Methods of Teaching the Business Subjects, and Supervised Teaching in High Schools. Twenty-five different courses make up the work given in the Department.²

Majors and Minors

The Woman's College of the University of North Carolina does not specify majors and minors in business but the courses outlined in the catalogue show that business subjects and economics were offered as such.

In general, Catawba College had a minimum requirement of 42 semester hours for the major field; 24 of which had to be in the major and 18 in a related minor. Students working for the degree of B. S. in Business Administration had to have 50 semester hours in business administration and economics. Not more than 6 of these could be in secretarial science.

The position taken by East Carolina Teachers College was stated in the paragraphs preceding this discussion.

Elon College required 36 semester hours in business administration as a major. Social Science was advised for a minor. More than one major could be selected. If only one was selected, then two minors, totaling 24 semester hours, relating to the major, were to be completed.

The High Point College Bulletin made this statement:

Twenty-four semester hours completed in any department shall constitute a major except in business administration, chemical engineering, home economics and music. Students majoring in these fields must follow

²East Carolina Teachers College Bulletin, Departmental Objectives, Greenville, North Carolina, 1940, page 11.

the requirements outlined in the catalogue for the respective departments.³

Lenoir Rhyne College required the completion of 30 semester hours in any subject, including the prescribed work in that subject. In addition, those planning to teach had to have a minor course totaling 24 semester hours. Commerce was listed as one of their majors.

In general, Queens College required majors and minors but no definite statement was made of them in connection with the Secretarial Administration course outlined in the catalogue.

Western Carolina Teachers College required a total of 54 quarter hours for major or minor in Business Education. Students were advised not to minor in Physical Education and Health, or in Science because of the difficulties in scheduling these particular subjects. The minor could be in English, Mathematics, French or German, or Social Science.

Graduate Program

The Graduate School of the University of North Carolina offered the only graduate courses offered in the state in 1940. The graduate program for business teachers offered at The Woman's College during the first summer term included courses in consumer economics, risk and insurance, business correspondence, business education in the secondary school, the curriculum in business education, methods in secretarial subjects, tests and measurements in business education, and thesis in business education.

In addition to the graduate courses offered in the first summer session, the University of North Carolina in Chapel Hill offered, during the second term, graduate courses in economics and commerce in

³High Point College Bulletin, Catalogue Number 1940-41, Announcements 1940-41, High Point, North Carolina, page 32.

order to supplement the offerings at The Woman's College. The courses at the two institutions were so planned as to make a coordinated twelve weeks program of study. Courses were alternated from summer to summer in order to accommodate candidates taking all of the work during the summer sessions.

Summary

These statements were made in the Summary and Interpretations of the National Survey of the Education of Teachers:

The place of general education in the preparation of teachers is relative and cannot be determined without considering the nature and amount of the other variables. Everyone admits that the teacher should be a well-informed, cultured person; that he should have an understanding of the educative process and a mastery of the necessary teaching skills appropriate to his field of work and to the age of the students taught.⁴

The subjects most frequently required by the colleges for this general cultural or academic education included: English, history, foreign language, mathematics or science, and physical education.

After the specialized certification requirements had been fulfilled, the most frequently offered courses were those in salesmanship, marketing, and labor.

The required professional courses met the certification requirements and presented the technical phase of teacher preparation. If the student were especially interested in the study of education or psychology, and if the courses were not all prescribed, opportunity was provided for a broad professional program permitting pursuit of special interests.

⁴United States Department of the Interior, Office of Education, National Survey of the Education of Teachers, Bulletin 1933, No. 10, Volume VI, Summary and Interpretations, Washington, D. C., 1935, page 75.

CHAPTER IV

ADMINISTRATIVE PROCEDURES RELATIVE TO THE BUSINESS TEACHER-TRAINING PROGRAM

Entrance Requirements

Qualifications other than scholastic records were included in the college entrance requirements in 1940. Table VIII shows that in general, the colleges required the student to have graduated from a standard or accredited high school if admitted without examination. Three denominational colleges specified that the student must have graduated with 15 units; one state college specified that the student must have graduated with 16 units. Two colleges required recommendation by the school from which the student came. One college specified good character as an essential qualification. Good health was a stated requirement for entrance to all the colleges.

In general, a student admitted by examination must have completed an equivalent of four-year high school and have had 15 or 16 units of credit. Table VIII shows the specific requirements of the colleges where the student was admitted by examination.

Subjects generally required for entrance, and the maximum credit acceptable by the colleges that had listed them, are shown in Table IX. The units ranged from 3 to 4 in English, from $1\frac{1}{2}$ to 4 in mathematics, from 1 to 4 in history, from 1 to 4 in science, and from 2 to 6 in foreign language. East Carolina did not require a foreign language for entrance, and The Woman's College did not require science for admission to the secretarial administration department.

Table IX shows that the various electives acceptable for entrance were listed by only four of the colleges. These listings reveal

TABLE VIII
REQUIREMENTS FOR ENTRANCE TO COLLEGE FROM SECONDARY SCHOOLS

Basis of Admission	WC	C	ECT	E	HP	LR	Q	WCT
AGE	16		16					
ADMITTED BY CERTIFICATE								
Graduates of accredited 4-year high schools								x
Graduates of standard or accredited schools	x	x		x	x	x	x	
Graduates of standard schools with 15 units		x		x			x	
Graduates of standard 4-year secondary schools with 16 units			x					
Recommended by school	x						x	
Have 15 units from accredited high school and make up deficiencies								x
Have 15 acceptable high school units if under 21 years of age						x		
Graduates of 4-year non-standard classified high school with 16 units who passed the state senior high school examination			x					
Evidence of having satisfactorily completed a standard secondary course in an accredited private or denominational school						x		
GOOD CHARACTER		x						
GOOD HEALTH	x	x	x	x	x	x	x	x
Vaccination for smallpox and typhoid					x			x

Abbreviations used for colleges:

WC	Woman's College of U. N. C.	HP	High Point College
C	Catawba College	LR	Lenoir Rhyne College
ECT	East Carolina Teachers College	Q	Queens College
E	Elon College	WCT	Western Carolina Teachers College

TABLE VIII (Continued)

REQUIREMENTS FOR ENTRANCE TO COLLEGE FROM SECONDARY SCHOOLS

Basis of Admission	WC	G	ECT	E	HP	LR	Q	WCT
ADMITTED BY EXAMINATION								
Completed equivalent of 4-year high school --and have 15 units credit	x	x	x	x	x			
Must pass uniform college entrance examination arranged by N. C. College Conference	x							
From nonaccredited schools with 15 units				x	x			
Proper units but unsatisfactory grades		x						
Graduates of nonaccredited 4-year high schools								x
Completed 15 units in accredited high school but did not gradu- ate					x		x	
Deficiencies allowed in foreign language, mathematics, or history provided 15 acceptable units are offered	x							
Deficiencies must be removed before sophomore year	x			x				
REJECTION								
If in lower half of graduating class	x							
If in lower third of graduating class							x	

TABLE IX
SUBJECTS ACCEPTED FOR ENTRANCE

Subject	Maximum Credit Acceptable						
	WC	Ca	ECT	E	HP	LR	Q
REQUIRED							
Algebra	1½						1
American History			1			1	
Biological or Physical Science			2				
Electives	3½		6½		6	5-6	5½
English	4	4	4	3	3	4	3
Foreign Language-- two years in one language	2	2-6		2	2	2	2
History	2			2	1		1
History and Social Studies		1-4					
History, Civics or Geography			1½				½
Mathematics		2-4	1½	2	2	2-3	1½
Plane Geometry	1						1
Science		1-4		1	1		1
ELECTIVES			Not listed		Not listed	Not listed	Not listed
Art	1						
Agriculture		2					
Bible	2	1		2			2
Drawing							1
English	4	4		4			4
Expression							½
Public Speaking	½						
Civics	1						
Civics and History		4					
History				4			
History and Other Social Sciences	4						
Social Science, in- cluding History and Civics							4
Economics and Socio- logy		2					
Economics or Social Science				1			

^aAt least 12 of the 15 units required for admission must include 4 in English and 2 in mathematics.

^bWestern Carolina Teachers College did not list specific entrance requirements.

TABLE IX (Continued)
SUBJECTS ACCEPTED FOR ENTRANCE

Subject	Maximum Credit Acceptable							
	WC	C	ECT	E	HP	LR	Q	WCT
ELECTIVES (Continued)								
Household Economics		2						
Mathematics	4	4		4			4	
Music	2			1			2	
Mechanical Drawing		2						
Woodwork, Forging and Machine Work		2						
Biology	1	1						
Botany	1	1					1	
Chemistry	1	1					1	
General Science	1	1					1	
General Science or Physical Geography	1							
Physical Geography		1						
Physics	1	1					1	
Physiography							1	
Science				4				
Zoology	1	1					1	
French	3	3		2			3	
German	3	3		2			3	
Greek	3	2					3	
Latin	4	4		4			4	
Spanish	2	3		2			2	
Commercial Geography	Not				Not			
Bookkeeping	more				listed			
Commercial Arithme- tic	than 3							
Stenography								
Home Economics								
Commercial Subjects		2						
Home Economics, Man- ual Training, Ag- riculture, Short- hand, Typing, Bookkeeping			Not more than 3					
Vocational Subjects				3		2		
Commercial Geography								
Vocational Agricul- ture							Not more than 3	
Bookkeeping								
Commercial Arithme- tic								
Stenography								
Manual Training								
Home Economics								

uniformity in allowance of credit for Bible, English, history, civics, and/or social science, mathematics, music, science, foreign language, and business subjects.

Shorthand, Typewriting, and Bookkeeping

The data which follow concerning entrance credit for shorthand, typewriting, and bookkeeping were compiled from responses to the questionnaire submitted to the colleges.

Six colleges expressed the preference that the student have no previous knowledge of shorthand, bookkeeping, or typewriting at the time of entrance. If the subjects had been studied, the procedure was as follows:

In one college, before being admitted to an advanced course, the student must have passed a qualifying test with a high score. If the advanced course was passed, full credit was given for both courses when the courses were required for graduation. The number of business hours required was thereby reduced, but not the number of hours required for graduation.

Two colleges gave a proficiency examination which if passed successfully, admitted the student to the advanced course in the subject but no reduction was made in the number of hours required for graduation.

One college admitted the student to the advanced course, but no reduction was made in the number of hours in business or in the total number of hours required for graduation.

One college required that the work be repeated.

The sixth college preferring that the student have no knowledge of shorthand, typewriting, and bookkeeping at the time of entrance, did not state what procedure was followed if the student had such knowledge.

One college preferred that the student have a knowledge of typewriting and shorthand but not of bookkeeping. If the student had knowledge of any of these subjects, a proficiency examination was given, which, if passed successfully, admitted him to an advanced course, but no reduction was made in the hours required in business or in the total number required for graduation.

The eighth college preferred the student to have a knowledge of typewriting and bookkeeping before entering. Knowledge of shorthand was considered "immaterial." If the advanced work could be done satisfactorily, the student was admitted to these classes, but no reduction was made in the number of hours required in business or for graduation.

The data pertaining to units allowed for high school business courses in Table X were compiled from catalogue statements. Where listed, two units were generally allowed for entrance in commercial and vocational subjects by the colleges. The terms used in the table were those stated in the catalogues. Stenography included typewriting and shorthand.

The striking difference of requiring from none to sixteen semester hours credit in shorthand and typewriting by the colleges is partially explained by the organization of the curricula in the different colleges as will be seen from the following statements:

In the quotation given on page 31, Catawba College included shorthand and typewriting in the electives which a student must include in order to meet the requirements of certification.

At High Point College, shorthand and typewriting had to be chosen as electives when business teacher training was taken.

In the Elon College Bulletin, Secretarial course 13-14 Shorthand, and course 15-16 Typewriting were explained thus:

TABLE X

PROCEDURE IN REGARD TO SHORTHAND, TYPEWRITING, BOOKKEEPING

	WC	C	ECT	E	HP	LR	Q	WCT
UNITS ALLOWED FOR HIGH SCHOOL								
Bookkeeping	1		Not stated		Not stated		1	Not stated
Commercial Subjects		2						
Stenography	1						1	
Vocational Subjects				3		2		
Typewriting								
IF PRESENTED FOR ADMISSION COLLEGE CREDIT NOT ALLOWED FOR:								
Bookkeeping								
Stenography		True						
SEMESTER HOURS CREDIT REQUIRED IN COLLEGE								
Bookkeeping and Accounting	6	8	6	6	8	12	6	8
Shorthand	12		11.3	6	6	6	11	8
Typewriting	4		5.3		4		4	6
COLLEGE CLASS PERIODS PER WEEK								
Accounting		4	6	6	5	3	4	5
Shorthand	5	6	5	6	5	5	5	5
Typewriting	3	6	5	6	5	5	5	5
COLLEGE CREDIT ALLOWED TOWARD GRADUATION FROM LIBERAL ARTS CURRICULUM								
Accounting	6	Yes			Yes	Yes		
Shorthand		Yes				Yes		
Typewriting		Yes						
COLLEGE CREDIT ALLOWED TOWARD GRADUATION FROM EDUCATIONAL CURRICULUM								
Accounting	6	Yes	Yes			Yes		As
Shorthand		Yes	Yes					elec-
Typewriting		Yes	Yes					tives
COLLEGE CREDIT ALLOWED TOWARD GRADUATION FROM A BUS. ADMR. CURRICULUM								
Accounting	12	Yes	Yes	Yes	As	Yes	Yes	
Shorthand	12	Yes		Yes	elec-	Yes	Yes	
Typewriting	4	Yes			tives only		Yes	

Business 13, 14, and 15, 16, taken together by a Junior or Senior majoring in Business Administration may count for six semester-hours, but this will not be certified on the student's record until all other semester-hour requirements are completed.¹

The range in the number of semester hours credit required in college accounting was from 6 to 8 for all colleges with the exception of one which required 12 hours.

The summary of the number of college class periods required in shorthand, typewriting, and accounting each week, as seen in Table X, was compiled from responses to the questionnaire. The length of the periods was not given but the catalogues of Queens, Lenoir Rhyne, Elon, East Carolina Teachers College and The Woman's College showed their periods to be approximately one hour.

Table X also shows the college credit allowed towards graduation for accounting, shorthand, and typewriting in the liberal arts, educational, and business administration curricula. In the colleges which had the three curricula, the practice of allowing college credit for these subjects varied from allowing credit only in accounting and shorthand in the business administration curriculum to allowing credit for all three subjects in each of the curricula.

Credit was allowed for accounting in all three curricula more frequently than either of the other subjects. Three colleges having business administration departments did not allow college credit for typewriting in the business administration curriculum.

The wide variation in practice with respect to college credit towards graduation for these subjects was due in part to the organization of the curricula in the several colleges. For example, Western Carolina Teachers College indicated that they had neither a liberal

¹The Bulletin of Elon College, Fifty-First Annual Announcement 1940-41 and Catalogue of 1939-40, Elon College, North Carolina, page 64.

arts nor a business administration curriculum. East Carolina Teachers College was the only other college that did not definitely state that a liberal arts curriculum was offered. The education curriculum was the only one of the three offered by all the colleges.

Graduation Requirements in Skill Performance
in Shorthand and Typewriting

The rate of dictation in shorthand required for graduation by the colleges was found to range from 80 to 120 words per minute; the required rate of transcription ranged from 18 to 40 words per minute; and the rate of typewriting speed ranged from 40 to 50 words per minute. Table XI shows the requirements as reported by each of the colleges.

TABLE XI

SKILL PERFORMANCE REQUIRED OF GRADUATES

Subject	WC	C	ECT	E	HP	LR	Q	WCT
Shorthand								
Rate of Dictation (Words per minute)	100	Not given	100	100	100	80	120	80 as a min- imum
Rate of Transcription (Words per minute)	25 Ap- prox.			35	18	35 to 40	35	35 Ap- prox.
Typewriting								
Rate of Speed (Words per minute)	50	Not given	50	50	50	45	50	40 mini- mum
Accuracy	98%			98.5%		1 or 2 errors on 5-10 min. test	Mail- able	

Guidance in Selecting Students for Business
Teacher-Training Classes

Two colleges made use of past scholastic records and individual counseling in selecting pupils for business teacher-training classes. Five colleges combined with past scholastic records and individual counseling, some or all of the following aids in guidance: intelligence tests, prognostic or aptitude tests, performance tests in skill subjects, and achievement tests. This note was added to the questionnaire returned by Queens College: "We are hoping to consider general teaching personality."

One college required a "better than average record" before allowing a student to sign for business teacher training.

Two colleges required an average of 3 or C on all previous work for enrollment in these courses.

Observation and Directed Teaching

As was shown in Chapter III, all the colleges met the state certification requirements with respect to the 3 semester hours credit of observation and directed teaching; one college required 6 hours. In the college requiring 6 semester hours, it was a year course; in the other colleges students could enroll for either semester.

The general plan of the courses, according to the catalogue descriptions, included theory, observation, lesson planning, and teaching under supervision followed by a period when the student was entirely responsible for certain class instruction. Daily and/or weekly conferences were scheduled for the student with the supervisors.

Table XII shows that seven of the colleges used the city schools for their observation and directed teaching classes. Two of the state colleges had demonstration schools in which they carried on this work. One of these colleges also used the city schools.

Guidance in Selecting Students for Business
Teacher-Training Classes

Two colleges made use of past scholastic records and individual counseling in selecting pupils for business teacher-training classes. Five colleges combined with past scholastic records and individual counseling, some or all of the following aids in guidance: intelligence tests, prognostic or aptitude tests, performance tests in skill subjects, and achievement tests. This note was added to the questionnaire returned by Queens College: "We are hoping to consider general teaching personality."

One college required a "better than average record" before allowing a student to sign for business teacher training.

Two colleges required an average of 3 or C on all previous work for enrollment in these courses.

Observation and Directed Teaching

As was shown in Chapter III, all the colleges met the state certification requirements with respect to the 3 semester hours credit of observation and directed teaching; one college required 6 hours. In the college requiring 6 semester hours, it was a year course; in the other colleges students could enroll for either semester.

The general plan of the courses, according to the catalogue descriptions, included theory, observation, lesson planning, and teaching under supervision followed by a period when the student was entirely responsible for certain class instruction. Daily and/or weekly conferences were scheduled for the student with the supervisors.

Table XII shows that seven of the colleges used the city schools for their observation and directed teaching classes. Two of the state colleges had demonstration schools in which they carried on this work. One of these colleges also used the city schools.

TABLE XII
PROCEDURE IN REGARD TO DIRECTED TEACHING

	WC	C	ECT	E	HP	LR	Q	WCT
PLACE								
In College Demonstration School	x							x
In City Schools	x	x	x	x	x	x	x	
SUPERVISORS								
High School Subject Teacher		x	x	x			x	x
Methods Teacher							x	
College Supervisor of Directed Teaching	x	x		x	x		x	x
Head of Department and Careful and Competent Teacher			x		x	x		
College Subject Matter and Methods Courses Teachers			x					
Director of Training School			x					
Head of Teacher-Training Department	x							
SUBJECTS			a		Elec- tive in	Elec- tive in		Elec- tive in
Accounting		x	x	x	x	x		x
Shorthand		x	x	x	x	x	x	x
Typewriting		x	x	x	x	x		x
Stenography		x	x	x	x	x		x
Business English		x						x
Divided between one skill and one non-skill subject in H. S. Commerce	x							

^aNo one student does work in more than two of these fields, in only one if majoring in some other subject also.

The state colleges made no special charge for this course; one denominational college charged \$25, one \$20, two \$15, and one \$10.

In response to the questionnaire, five colleges stated that the supervision of the directed teaching was shared by a member of the college faculty and a high school subject teacher. Six of the

colleges had a college supervisor of directed teaching. At least two persons were responsible for the work in every case; in one college four persons were responsible.

In general observation and directed teaching were most frequently offered in accounting, shorthand, in typewriting and in stenography which was a combination of shorthand and typewriting.

A study of the catalogues used in this study revealed that:

The seniors of Woman's College, after a period of observation were made responsible for a certain part of the teaching. They devoted 5 periods a week during either semester to this work and received 3 semester hours credit. Daily and weekly conferences were had with the supervisors. Special methods units were taken concurrently with the directed teaching.

Catawba College offered directed teaching in connection with the course in methods of teaching in high school. The seniors were put in charge of classes after a period of observation. The course, for which 6 semester hours credit was given, was offered during the second semester. The number of hours required per week was not stated.

East Carolina required of its seniors, one quarter in each of the two major fields chosen for study. By special arrangement, both quarters could be done in the same field. Nine hours per week for 2 quarters were required to earn 6 quarter hours credit.

Elon's students observed and taught at least 60 hours in the subject of the major field. The course could be taken in either the fall or the spring term. Three semester hours credit were given for the work.

High Point gave 3 semester hours credit for a period of observation followed by a period when the student was given full responsibility for a certain amount of classroom work. Neither the length

of the course nor the number of hours spent in it were mentioned. Weekly and daily conferences were held with the supervisors.

Lenoir Rhyne required observation, conference periods, and 30 hours of actual classroom teaching. The course could be taken either semester.

For the 3 to 6 hours a week spent in directed teaching at Queens, variable credit was offered depending on the hours devoted to it. The course extended through the first and second semesters.

Western Carolina Teachers College allowed 8 quarter hours credit for 10 hours a week spent in observation and supervised teaching in the Training School. This could be taken any quarter. If a student was adjudged unpromising or in any way unfit to teach, the privilege of taking this course could be refused. For the same reason the college reserved the right to refuse to grant a degree.

The information presented in the foregoing discussion may be summarized as follows: for observation and directed teaching the range in hours per week was from 3 to 10; the range in length of course was from 1 quarter to 2 semesters; the range in credit allowed was from 3 to 6 semester hours.

Preparation for Teaching Other Than Business Subjects

Responses to the questionnaire revealed that 2 institutions prepared their students to teach business subjects only; 3 required or recommended that they prepare to teach English as well as business subjects; and 3 prepared their students to teach business subjects and at least one other subject such as English, history, social science, mathematics, home economics, physical education, music, or French. Here again is manifest the influence of the state certification requirements which recommended that applicants qualify to teach two or more subjects.

Business Experience

The responses to the questionnaire revealed that only one college required business experience of its graduates. Elon College required 40 hours of experience in general office work but allowed no credit for it.

A note on the questionnaire returned by Western Carolina Teachers College stated, "We give credit for supervised experience but do not have sufficient business houses available to require experience." The catalogue of this college designated one course as "Business Laboratory," for which 1 to 3 quarter hours credit was given for work done in the summer or at any time when little or no classwork was being carried. The department head outlined the requirements for those wishing to work, inspected the work while the student was on the job, and, with an examining committee, determined the amount of credit to be allowed for the experience.

The other colleges did not require business experience. Two favored requiring it. East Carolina did not favor it "under present conditions, highly desirable, however." No explanation was made of the statement.

Graduation Requirements for Business Teacher-Training Students

At the time of this investigation, the semester hours required by the eight colleges for graduation ranged from 122 to 130; for specialized courses from 36 to 54, and for professional courses from 18 to 25.

Each institution required quality ratings of its graduates but each college had its own quality standards. This may have been due in part to the fact that an A grade in some colleges gave 4 quality points, in others it gave only 3. Table XIII shows the graduation

TABLE XIII

REQUIREMENTS FOR GRADUATES AND DEGREES GRANTED

COLLEGE	HOURS FOR GRADUATION	SPECIALIZED HOURS	PROFESSIONAL HOURS	QUALITY POINTS ^a	DEGREES GRANTED
WC	122	36	21	204	B.S. in S.A.
Catawba	128	and Econ. 50	18	90 with C or above	B.S.
ECT	126 2/3	36	18-19	Average grade 3 on re- quired subjects	B.A.
Elon	126 or 128	45	18	120	B.A.
HP	130--6 of these in P. E.	54	18	Average of C on major	B.S. in Com.
LR	128	36	25	.6 of semester hours taken	A.B.
Queens	125	38	24	124	B.S. in S.A.
WCT	128 or 128 2/3	36	18-22	192 Average C on Major and Minor	B.S.

^aQuality Points--In general each quarter or semester hour of work of grade A carries with it three quality credits; of grade B, two quality credits; of grade C, one quality credit; of grade D, no quality credit.

requirements of the colleges in regard to total hours, specialized hours, professional hours, and quality points.

At the time of this investigation, 3 colleges conferred the Bachelor of Arts degree and 5 conferred the Bachelor of Science degree

or a modification of it. The University of North Carolina conferred the Master of Science degree for graduate work in business.

Summary

At the time of this investigation, graduates of standard or accredited high schools were admitted without examination to the eight colleges granting degrees to white business teacher-training students. Nongraduates who had completed the equivalent of four-year high school and who had 15 or 16 units of credit were admitted by examination. A student had to be in good health to be admitted to any of the colleges.

The entrance requirements generally included units in English, mathematics, history, science, and foreign language. From 2 to 3 units were usually allowed for business and vocational subjects when they were presented as electives.

Six colleges preferred that the student have no previous knowledge of bookkeeping, shorthand, and typewriting; one preferred no previous knowledge of accounting; and another felt that a knowledge of shorthand was "immaterial." Where the student had such knowledge, the procedure varied from having the work repeated, to allowing credit if the advanced course, to which admittance was gained either with or without examination, could be passed satisfactorily. Usually the hours required in business and for graduation were not reduced in consideration of previously acquired abilities in these subjects.

The college courses in shorthand, accounting, and typewriting were listed as requirements by some of the colleges, and were included as electives by others.

From 5 to 6 college class periods per week were required in shorthand, and from 3 to 6 in accounting and typewriting.

Credit towards graduation for shorthand, typewriting, and accounting was allowed most frequently in the business education curriculum. The practice varied from allowing credit only for accounting and shorthand in the business administration curriculum to allowing credit for all three subjects in the business administration, education, and liberal arts curricula when the colleges offered all three.

Marked variations in skill performance required for graduation were found when the rate of transcription was considered in the light of the typing speed requirement.

Past scholastic records, individual counseling, and various psychological and achievement tests were the most frequent methods used in selecting prospective business teacher-training students.

In order to meet the state certification requirements, the colleges required at least 3 hours of observation and directed teaching. This was offered in the senior year. The general plan of the work included theory, observation, and practice. Two state college demonstration schools and the city schools were used for this work, which was directed by a high school teacher and at least one college teacher or supervisor of directed teaching. The subjects in which directed teaching was most frequently offered were shorthand, typewriting, bookkeeping, and stenography. Charges ranging from \$10 to \$25 were made by the denominational institutions for the work; the state colleges charged no fee. The range in hours per week for this subject was from 3 to 10; the range in length of course was from 1 quarter to 2 semesters, and the range in credit allowed was from 3 to 6 semester hours.

In general, business teacher-training students were prepared to teach business and one other subject. Business experience was required by only one college and no credit was given for it. One

state college offered credit for supervised experience but could not require it because of lack of work experience opportunities in the community.

The graduation requirements of the colleges included from 122 to 130 semester hours; from 36 to 54 semester hours in specialized subjects; from 18 to 25 semester hours in professional subjects; and various quality points.

At the time of this investigation, 3 colleges conferred the Bachelor of Arts degree and 5 conferred the Bachelor of Science degree or a modification of it on the graduates in business teacher training. The Woman's College conferred the Master of Science degree for graduate work in business.

CHAPTER V

FACULTY PERSONNEL, LIBRARY AND LABORATORY FACILITIES, NONTeaching SERVICES, PLACEMENT, AND FOLLOW UP

This chapter discusses faculty personnel, library and laboratory facilities, nonteaching services, placement, and follow-up services affecting the program beyond the curricular provisions.

Faculty Personnel

The teacher is recognized as a vital factor in any school program. Much of the success of a school depends upon the ability, interest, training, and experience of the teachers. Table XIV gives the data concerning the professional preparation of the faculty personnel. At the time of this investigation, there were among the 31 college business teacher-training teachers, 3 with Doctor's degrees; 2 with more than 60 hours of graduate work; 19 with Master's degrees; 1 with 30 hours of graduate work; and 6 with Bachelor's degrees. Only 9 of the 31 had had business experience.

Business Teacher-Training Library Facilities

A library is essential in any teacher-training program, hence a survey of the business teacher-training library facilities of the colleges in 1940 is included in this study. Eight inquiries were sent to the colleges; six were returned.

Answers to the inquiries showed that six colleges received the following periodicals:

The Journal of Business Education--a subscription magazine and also the official publication of the National Council for Business Education.

TABLE XIV

NUMBER OF COLLEGE TEACHERS ENGAGED IN TEACHING BUSINESS
TEACHER-TRAINING CLASSES AND EXTENT OF THEIR
PROFESSIONAL PREPARATION

Professional Preparation	Number of Teachers							
	WC	C	ECT	E	HP	LR	Q	WCT
Doctor's Degree	1					1		1
60 Hours of Graduate Work			1	1				
Master's Degree	5		3	2	4	2	2	1
Equivalent of Master's Degree (30 Hours Graduate Work)						1		
Bachelor's Degree		2		1	1	1	1	
Less than Bachelor's Degree								
Total	6	2	4	4	5	5	3	2
Business Experience		2	3		2	2		

The Business Education World--a subscription publication of the Gregg Publishing Company.

The Balance Sheet--an advertising and service medium of The South-Western Publishing Company. Free.

Five colleges received The National Business Education Quarterly--published by the Department of Business Education of the National Education Association. Free with membership dues.

Three colleges received The Business Education Digest--published quarterly by the National Business Teachers Association. Membership fee entitles subscriber to the Digest and a copy of the Association's yearbook.

The Woman's College received in addition to the above magazines: Occupations--the vocational guidance magazine, an important subscription magazine, published by the Vocational Guidance Association.

The National Association of Commercial Teacher-Training Institutions Bulletin--a publication which requires membership in the Association.

Modern Business--the official journal of the Southern Business Education Association.

Ball State Commerce Journal--published by Ball State Teachers College, Muncie, Indiana.

Louisiana Commerce Journal--published by the Commerce Section of The Louisiana Teachers Association.

Commercial Education--bulletin of Whitewater State Teachers College, Whitewater, Wisconsin.

National Contest Journal--published by the New York State Contest Association.

Review of Business Education--published by Oklahoma Agricultural and Mechanical College.

Tri-State Bulletin--a bulletin serving the field of western Pennsylvania, eastern Ohio, and parts of West Virginia.

Business education yearbooks. Four associations of business teachers had issued yearbooks at the time the inquiry was made concerning the business teacher-training library facilities. The Commercial Education Association of New York and Vicinity had published 10 volumes, Eastern Commercial Teachers' Association 13 volumes, National Commercial Teachers Federation 6 volumes, and the Southern Business Education Association 1 volume; a total of 31 volumes. All of these were available for purchase in 1940.

The total number of yearbooks in the libraries of the six colleges was 70. Forty-three volumes were in the state college libraries; one of these had 1 volume, one had 12, and one had 30. The volumes reported in the libraries of the three denominational colleges were 27; one of these had 3 copies, one had 11, and one had 13.

Books. The number of volumes of business reference material available for the business teacher-training students was given by the five colleges that responded to this part of the inquiry as: 451, 100, 90, 15, and 10. From the figures given, it is seen that one college had more than twice the number of the other four combined. Two state schools together had almost five times as many as the three denominational schools combined.

The report from High Point College is included in the above data. A comment added to their questionnaire stated, "Our library has but very little, most of this material is taken by the teachers in the department." A similar situation may have existed in other colleges with respect to both books and magazine subscriptions.

Laboratory Facilities

Table XV shows the office machines available for the teacher-training classes in the colleges in 1940. Typewriters and mimeographs were the only machines available in every college. All but 1 college had an adding machine. The equipment generally owned, in addition to the machines mentioned above, included from 1 to 12 calculators, from 1 to 2 check protectors, from 1 to 5 dictaphones, from 1 to 2 mimeoscopes, and 1 ditto machine.

Five of the colleges had 3 different kinds of duplicators; two had 1 kind. There was only 1 banking machine and 1 dating machine listed. In view of the fact that from 6 to 12 hours of accounting

TABLE XV

OFFICE MACHINES AVAILABLE FOR USE BY THE TEACHER-TRAINING CLASSES

Machines	WC	C	ECT	E	HP	LR	Q	WCT
Adding	3		1	3	2	4	1	2
Banking	1							
Bookkeeping	3				1	1		
Calculators	6		12	2	5	1	1	
Check Protectors	1		1	1	2		1	1
Dictaphones and Other Transcribing Machines	2		5	2	1		3 units	1
Duplicators								
Ditto	1		1	1	1		1	1
Fluid process	1							
Hecktographs	2		1	1	1		1	
Mimeographs	1	x ^a	2	1	1	2	1	2
Mimeoscope	2			1	1	1	1	1
Stamp Affixer			1			1		1
Stapling	1	x	3	1			2	
Typewriters	57 ^b	x	62	30	21	35	25	30
Long Carriage			1					

Abbreviations used for colleges:

WC	Woman's College of U. N. C.	HP	High Point College
C	Catawba College	LR	Lenoir Rhyne College
ECT	East Carolina Teachers College	Q	Queens College
E	Elon College	WCT	Western Carolina Teachers College

^aNo figures given, check marks used.^bSeven of these were in the offices of the department. This number does not include the machines used by the one-year department.

was required by the colleges, it is interesting to note that only 3 bookkeeping machines were listed. If the adding machines were constructed for purposes other than adding, it was not indicated.

On the Woman's College questionnaire after the item dictaphone, the word "transcriber" was inserted. Similarly, on the Queen's questionnaire, after the word ditto, "direct process" was inserted; and after dictaphone, the words "all 3 units--1 each" were written. No further explanations were given.

The following additional information was reported by East Carolina Teachers College: "Large Dictionaries--3; steel cabinets--3; desks in shorthand, typing, and accounting rooms, Modern American Seating Co. desks of the best quality available; school furnishes all typing and accounting supplies except typing paper."

Nonteaching Services

In answer to the question, "What extra services are rendered by your department, such as conducting state contests, arranging for special conferences, etc.," two respondents reported "None"; one, "Nothing definite"; and one, "Conducting state contests, arranging for special conferences, and rendering consulting service." No special services were reported by the other two colleges that responded to the inquiry.

Placement

Table XVI shows that at the time of this investigation, seven colleges helped place their graduates either through placement bureaus maintained by the colleges; or through such bureaus and recommendations sent by the teachers. One college used only recommendations sent by teachers. One charged a fee of one dollar for placement service.

TABLE XVI
PLACEMENT AND FOLLOW UP

	WC	C	ECT	E	HP	LR	Q	WCT
PLACEMENT BUREAU	x	x	x		x	x		x
Services continuous	x	x						
No charges	x	x	x					
Annual Fee \$1								x
INSTRUCTORS REPLY TO APPLICATIONS					x			
PLACEMENT BUREAU AND RECOMMENDATION SENT BY INSTRUCTORS							x	
PLACEMENT BUREAU AND FACULTY COMMITTEE						x		
RECOMMENDATION SENT BY INSTRUCTORS				x				
FOLLOW UP STUDIES OF GRADUATES CONDUCTED	From this year	Partially	Yes	Yes	No	No	Yes	Yes

An average of 81.4 per cent of the calls for business teachers was filled by the 7 colleges reporting on this question. The range of from 40 to 100 per cent of calls filled by the colleges as seen in Table XVII is partially explained by the data which follows in Table XVIII where the reasons for failure to fill calls are tabulated. "An insufficient number of graduates" led the list of reasons for this failure, followed by "Better salaries in office positions." "Unusual combination of subjects demanded," "Lack of experience," "Religious preference," "Students refuse to accept positions open to them," and "Do not wish to teach," were listed only once as reasons for failure to fill calls.

TABLE XVII
PER CENT OF CALLS FOR BUSINESS TEACHERS FILLED

College	Per Cent
Woman's College of the University	90
Catawba College	Not given
East Carolina Teachers College	80
Elon College	40
High Point College	60
Lenoir Rhyne College	100
Queens College	100
West Carolina Teachers College	100

TABLE XVIII
REASONS FOR FAILURE TO FILL ALL CALLS FOR BUSINESS TEACHERS

Reasons	WC	C	ECT	E	HP	LR	Q	WCT
Insufficient number of graduates	x	x	x		x			
Unusual combination of subjects demanded	x							
Lack of experience	x							
Right person not available at time needed	x	x						
Better salaries in office positions	x	x						
Do not wish to teach				x				
Religious preference		x						
Students refuse to accept positions offered		x						

Elon's one reason for failing to fill 60 per cent of the calls for business teachers was "Do not wish to teach." This statement was perhaps explained in the last paragraph of a letter written to the writer by W. W. Howell, of the Department of Business Administration on October 31, 1940.

Incidentally, we do not emphasize commercial teacher training, because the demand on us is primarily from those who are planning to follow business as a vocation. We are, however, insofar as our teaching staff is concerned, quite adequately prepared to give such training. Each of the four business teachers have done quite a bit of study in the field and one has her graduate major in education.

Queens College reported, "Could have filled several more."

The data concerning the per cent of calls for business teachers filled and the reasons for failure to fill all the calls presented in Tables XVII and XVIII, were obtained from the catalogues and from the responses to the questionnaire.

The data for Table XIX which shows the per cent of the 1940 business teacher-training graduates who secured positions in the teaching and business fields, were compiled from responses to the questionnaire. The range in the per cent of the graduates who secured positions to teach strictly business subjects in 1940 was from 20 to 100 per cent. The majority of the teachers from 7 colleges secured positions to teach business subjects only. From 1 college only did all the graduates securing teaching positions, teach business and other subjects.

Table XIX reveals that over half of the business teacher graduates in 1940 secured positions teaching strictly business subjects; a little less than one-fourth secured positions teaching business and other subjects; and about one-fifth secured positions in the business field. One became an athletic coach.

Catawba's 50 per cent entering the business field might be partially explained by the fact that "Better salaries in office positions," was one reason given for failure to fill all calls for teachers.

Lenoir Rhyne did not comment on the extra 10 per cent shown on the Table, and Western Carolina did not explain the missing 13 per cent.

TABLE XIX

PER CENT OF 1940 BUSINESS TEACHER-TRAINING GRADUATES
WHO SECURED POSITIONS

Position	WC	C	ECT	E	HP	LR	Q	WCT
Teaching Strictly Business Subjects	100	50	72	20	100	30	67	
Teaching Business and Other Subjects			16			80		87 Ap- prox.
Secretarial and Accounting		50	12	60			33	
Athletic Director				20				

Follow Up of Graduates

Two of the colleges had no plan for following up their graduates after they had placed them. The methods which the others used were not reported.

Summary

Teachers and students in the small colleges found little business reference material available in the college libraries. Usually there were 3 magazines, from 1 to 12 copies of the year books, and from 10 to 90 volumes of other business books. Of the total of 736 volumes--including yearbooks--found in the libraries of the colleges, 480 or about 65 per cent were in the library at The Woman's College.

The equipment in most of the colleges was used for business teacher training and other business classes. The machines most often found in the classrooms included typewriters, mimeographs, and adding machines. The equipment generally available in addition to the above included calculators, check protectors, dictaphones, dittos, and mimeoscopes.

At The Woman's College the enrollment in the business department, exclusive of the one-year department, was 3 times that of East Carolina yet East Carolina had 6 more calculators, 3 more dictaphones, 1 more mimeograph, and 6 more typewriters than The Woman's College.

With 107 students enrolled it is evident that East Carolina planned for the future when buying equipment.

At the time of this investigation about two-thirds of the 31 teachers in charge of the business teacher-training program in the state held the Master's degree, and about one-tenth held the Doctor's degree.

After training the students for the work, many of the teachers helped place them, through recommendations and college placement bureaus, in positions where they usually taught business subjects only. Some of the colleges provided for following up the graduates after they were at work.

Seven colleges filled about four-fifths of the calls for business teachers. The principal reasons given for failure to fill all the calls were an insufficient number of graduates, and better salaries in office positions.

CHAPTER VI

SUMMARY OF FINDINGS AND RECOMMENDATIONS

The preceding chapters have presented the status of business teacher-training facilities in the white degree-granting institutions of the state of North Carolina in 1940, with a brief summary of the development of business teacher training in the state from its beginning in 1932. This chapter summarizes the various findings with respect to the growth and development, curricular requirements and offerings, administrative procedures relative to the business teacher-training program, faculty personnel, library and laboratory facilities, nonteaching services, placement, and follow up.

In 1932 at The Woman's College of the University of North Carolina 2 teachers taught the 11 students enrolled in the first business teacher-training classes offered to white students in the state of North Carolina. By 1938 similar classes had been organized in seven other colleges in the state. The 1940 business teacher-training enrollment in seven of the institutions was reported as 425; 215 of the number being enrolled at The Woman's College. The enrollment for High Point College was not obtainable. Three of the colleges offering the training are state schools; the smaller of the state teacher colleges is located in the mountains of the west, the larger on the eastern seaboard, and the University in the piedmont section of the state. The historic denominational colleges offering business teacher training are located within a radius of 100 miles of the University. In 1940, four of the denominational colleges reported a total business teacher-training enrollment of 74; the oldest one of the group, organized in 1851, reported 13. Most of the colleges offered business courses in addition to business teacher training. One of the schools admitted

women only; six were coeducational; one admitted only women to the undergraduate program but had, beginning in the summer of 1937, a co-educational program of offerings as a part of the Graduate School of the University of North Carolina.

In general the institutions preferred that the student have no previous knowledge of shorthand, bookkeeping, or typewriting at the time of entrance. If these subjects had been studied in high school, the administrative procedure varied from having the work repeated to admitting the student to the advanced class with or without an examination, usually without reduction in the number of hours of business required or in the total number of hours required for graduation.

Graduates of high schools were admitted to the colleges without examinations; other entrants with the equivalent of four-year high school education, were admitted by examination. Admittance in either case was dependent upon good health.

In general, the teacher-training curricula, consisting of general academic, specialized, and professional courses, were administered jointly by two departments of the college. The work during the freshman and sophomore years in most of the colleges, was primarily academic. Upon the individual's decision made at the end of the sophomore year would depend whether the future of the student would be spent in an office or in a schoolroom. By means of past scholastic records, different testing programs, and individual counseling, the teachers assisted the student in making the decision. If teaching was chosen, particular attention was given to arranging schedules in the junior and senior years that would meet the state certification requirements in professional and specialized courses.

Some colleges had courses outlined in detail; other colleges stated that after certification requirements had been met, the student

was at liberty to choose additional courses, including classes in economics and business, to meet the degree requirements ranging from 122 to 130 semester hours. Choice of electives necessitated a careful study in most of the college catalogues because of the wide variations in the offerings and in the placement of the courses in the curricula.

College requirements in accounting, shorthand, and typewriting were listed by some of the institutions; others stated that the required hours in these subjects were to be chosen from the listed electives. Wide variation was found in the speed requirements in dictation, transcription, and typewriting.

At least three hours of observation and directed teaching were required in the senior year. The city schools, the college demonstration school, or both were used for conducting these classes. The general plan of the course included theory, observation, and practice under the direction of a high school critic teacher and at least one college teacher or supervisor of directed teaching. The business subjects most frequently used in the course were typewriting, accounting, and stenography. Wide variation was found in the number of hours required per week, in the length of the course, and in the credit allowed for observation and directed teaching. In general the business teacher-training student was prepared to teach business subjects and one other subject.

Business experience was required by only one college; no credit was allowed for it. One other college offered credit for supervised experience but could not require it because of a lack of business opportunities in the community.

A graduate in business teacher training received either the degree of Bachelor of Arts, Bachelor of Science, or a modification

of the Bachelor of Science. The University of North Carolina conferred a Master of Science for graduate training in the field.

In 1940 about two-thirds of the 31 college business teacher-training teachers in the state held the Master's degree. Nine of the 31 had had business experience. In one college, in addition to teaching, the teachers conducted state contests, arranged for special conferences, and rendered consulting services.

The equipment available in each of the teacher-training departments included typewriters and mimeographs. Additional machines generally found in the classrooms were adding machines, calculators, check protectors, dictaphones, dittos, and mimeoscopes.

The business teacher-training library facilities were meager in most of the colleges. In general three business magazines and four yearbooks were available in the smaller colleges that reported on the libraries. Most of the business reference material was found in the libraries of East Carolina Teachers College and of The Woman's College.

In general, graduates seeking positions were placed by recommendation of the teachers and by college placement bureaus. Contact with the student was usually maintained through a follow-up program.

The obvious inadequacy of library facilities in most of the teacher-training institutions suggests the desirability on the part of the State Department of Education of establishing and imposing definite requirements with respect to this phase of teacher training.

It is recommended that opportunity be provided for teacher-training students to have actual business experience and that credit be allowed for it.

It is recommended also that some action be taken toward equalizing and improving the laboratory equipment to afford equitable opportunities for teachers in training.

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- O'Briant, Margaret Shepherd, "The Status of Business Education in Institutions with Chapters of Pi Omega Pi." Unpublished Master's thesis, Oklahoma Agricultural and Mechanical College, 1940.
- Spruill, Patty, "History of the Department of Business Education of The Woman's College of the University of North Carolina." Unpublished article.
- Tarkington, R. N., State University Programs for Preparation of Business Teachers as Compared with Programs for Home Economics, English, and Social Science Teachers. Doctoral dissertation, New York University, 1938. Abstracted in National Association of Commercial Teacher Training Institutions, Bulletin 18. Chicago: National Association of Commercial Teacher Training Institutions, October 1939.
- United States Department of the Interior, Office of Education, National Survey of the Education of Teachers, Bulletin 1933, No. 10, Volume VI, Summary and Interpretation. Washington: Government Printing Office, 1935.
- The First Annual Catalogue of the State Normal and Industrial School, 1892-93. Greensboro: State Normal and Industrial School, 1893.
- East Carolina Teachers College Bulletin, Departmental Objectives. Greenville: East Carolina Teachers College, 1940.

College Bulletins Used in This Study

- Catawba College, April 1940
East Carolina Teachers College, May 1940
Elon College, February 1940
High Point College (No date.)

Lenoir Rhyne College, March 1940
Queens College, January-February 1940
The Woman's College of the University of North Carolina,
April 1940
Western Carolina Teachers College, February 1940

LIST OF LITERATURE CITED WITH ABSTRACTS OF THE MAIN POINTS

October 2, 1947

Dear Sir:

Under the direction of Dr. Frank S. Littlejohn of the Faculty of the University of North Carolina at Chapel Hill, I am conducting a study and evaluation of the various methods of teaching English to the students of the University of North Carolina at Chapel Hill. I am writing you for the purpose of requesting that you be included in the study.

APPENDIX

After making a survey of the various methods of teaching English to the students of the University of North Carolina at Chapel Hill, I am writing you for the purpose of requesting that you be included in the study. I am writing you for the purpose of requesting that you be included in the study.

Since the Editor of the Yearbook is asking for an abstract of my study, I shall appreciate it if you will have the abstract of my study published in the Yearbook. I am writing you for the purpose of requesting that you be included in the study.

Respectfully yours,

Walter Arnold Davis

Enclosure

COPY OF LETTER MAILED WITH GENERAL QUESTIONNAIRE

October 8, 1940

Dear Sir:

Under the direction of Mr. Vance T. Littlejohn of the Department of Secretarial Science of The Woman's College of the University of North Carolina, I am endeavoring to make a study and evaluation of the business teacher-training facilities offered by the colleges of North Carolina. This survey is being made for the Southern Business Education Association Yearbook.

After making a careful study of your catalogue, I find there are points about which I shall need further information if the study is to reveal the real situation.

Since the Editor of the Yearbook is anxious for the completed study, I shall appreciate it if you will have the enclosed questionnaire filled out and returned to me by October 1.

Respectfully yours,

(Miss) Artelee Puett

Enclosures 2

GENERAL QUESTIONNAIRE

1. What year did you begin business teacher-training courses? _____

2. What department of your institution has the responsibility for preparing commercial teachers for secondary schools? Please check.

The Department or College of Education _____

The Department of Business Education _____

The Department of Commerce _____

The two Departments of Education and Commerce _____

The two Departments of Economics and Secretarial Science _____

Others. Please indicate. _____

3. Please give: (Note: Total of b, c, and d should equal a)

a. The total number of teachers engaged in teaching strictly business subjects which are taken by prospective com- mercial teachers. _____

b. Number of above with Doctor's Degree _____
Number of above with equivalent of Doctor's Degree _____
(90 hours of graduate work) _____

c. Number of above with 60 hours graduate work _____
Number of above with Master's Degree _____
Number with equivalent of Master's Degree _____
(30 hours of graduate work) _____

d. Number with Bachelor's Degree _____
Number with less than Bachelor's Degree _____

e. Number with actual business experience _____

4. What Degree is given to business teacher-training graduates? _____

5. Amount charged for directed teaching. Please check.

Nothing _____

\$10 _____

15 _____

\$20 _____

25 _____

Any other amount _____

6. Please check.

Subjects in which directed teaching is required; is elective.

Bookkeeping _____

Shorthand _____

Stenography _____

Typing _____

Others _____

7. Place of observation. Please check:
 In college demonstration school _____
 In city schools _____
8. Place of directed teaching. Please check.
 In college demonstration school _____
 In city schools _____
9. Supervision of directed teaching. Please check.
 High school subject teacher _____
 Methods teacher _____
 College supervisor of directed teaching _____
 Head of teacher-training department _____
 Head of department and competent teacher _____
 Other. Please specify. _____
10. Enrollment. Please state.
 Number in senior teacher-training classes 1939-40 _____
 junior _____
 sophomore _____
 Number in senior secretarial science classes 1939-40 _____
 junior _____
 sophomore _____
11. Per cent of last year's graduates in these classes who secured positions
 teaching strictly commercial subjects _____
 teaching commercial and other subjects _____
 secretarial _____
 retail selling _____
12. Per cent of calls for commercial teachers filled. Please check.
- | | |
|-----------|------------|
| 25% _____ | 70% _____ |
| 40% _____ | 80% _____ |
| 50% _____ | 90% _____ |
| 60% _____ | 100% _____ |
13. Reasons for failure to fill all such calls. Please check.
 Insufficient number of graduates _____
 Unusual combination of subjects demanded _____
 Lack of experience _____
 Religious preference _____
 Salaries too low _____
 Right person not available at time needed _____
 Better salaries in office positions _____
 Students refuse to accept positions open to them _____
 Do not wish to teach _____
 Other reasons. Please state. _____

14. Business experience required and credit allowed for in teacher-training classes.

	Hours Required	Credit Given
Bookkeeping	_____	_____
General Office Work	_____	_____
Salesmanship	_____	_____
Stenography	_____	_____
Others. Please state.	_____	_____

15. Do you favor requiring actual business experience of graduates?
 _____ Yes; _____ No.

16. Skill performance required:

Shorthand
 Dictation rate _____ words per minute
 Transcription rate _____ words per minute

Typing
 Speed _____ words per minute
 Accuracy _____

17. Office machines available for use by teacher-training classes:

	Number
Adding machines	_____
Billing machines	_____
Banking machines	_____
Bookkeeping machines	_____
Calculators	_____
Check protectors	_____
Dictaphones	_____
Duplicators	_____
Mimeographs	_____
Ditto	_____
Edison Dick	_____
Hecktograph	_____
Letter folder	_____
Mimeoscope	_____
Stamp affixer	_____
Stapling machines	_____
Typewriters	_____
Others. Please list.	_____

18. What services are offered by your institution in securing positions for your business teacher-training graduates? Please check.

Placement Bureau	_____
Placement Bureau and recommendation sent by instructors	_____
Placement Bureau and faculty committee	_____
Recommendations sent by instructors	_____
Faculty committee and recommendation sent by instructors	_____
Faculty committee	_____
Others. Please state.	_____

19. Are your students expected to prepare themselves to teach other subjects as well as business subjects? Yes _____; No _____.
If so, please indicate the field or fields required:
English _____ history _____ social science _____ mathemat-
ics _____ other _____
20. Do you prefer that your students have any or all of the following subjects before they come to you?
- | | Yes | No |
|-------------|-------|-------|
| Bookkeeping | _____ | _____ |
| Shorthand | _____ | _____ |
| Typing | _____ | _____ |
21. Please indicate your practice in regard to a student who has taken a commercial subject in high school or business college. Check the number below which describes your practice in such a case.
- The student is required to repeat the work in college. _____
 - The student is automatically admitted to an advanced course in the subject, but no reduction is made in the number of hours required for graduation or in commerce. _____
 - The student is automatically given a specified number of hours of college credit in the subject, counting both in commerce and toward graduation. _____
 - The student is automatically admitted to an advanced course in the subject, and a reduction is made in the number of hours required in commerce, altho no reduction is made in the total number of hours required for graduation. _____
 - The student is given a "proficiency examination" which if passed successfully, admits him to an advanced course in the subject, but no reduction is made in the number of hours required in commerce or in the total number of hours required for graduation. _____
 - The student is given a "proficiency examination" which if passed successfully, admits him to an advanced course in the subject and a reduction is made in the number of hours which he must complete in commerce, altho the total number of hours required for graduation is not reduced. _____
 - The student is given a "proficiency examination" which if passed successfully, entitled him to a specified number of hours of college credit in the subject, counting both in commerce and toward graduation. _____
 - If another plan is used please explain.
22. Class periods per week required in accounting _____
typewriting _____
shorthand _____

23. Please check if college credit toward graduation is allowed for work in

	<u>Liberal Arts Cur.</u>	<u>Education Cur.</u>	<u>Bus. Adms. Cur.</u>
accounting	_____	_____	_____
shorthand	_____	_____	_____
typewriting	_____	_____	_____

24. Is anything done in the way of guidance to discourage certain students from entering upon or continuing in the commercial education curriculum when the evidence seems to indicate that they would not become successful teachers?
 Yes _____; No _____. If so, upon what basis is this done?

Please check:

Intelligence tests	_____	Performance tests in skill	
Achievement tests	_____	subjects	_____
Prognostic or		Past scholastic record of	
aptitude tests	_____	student	_____
Other ways. Please state.		Individual counseling	_____

25. Do you conduct a follow-up study of your commercial graduates?
 Yes _____; No _____.

This questionnaire was filled out by:

Name _____

Position _____

REQUEST FOR INFORMATION ON LIBRARY AND NONTEACHING SERVICES

January 10, 1941

Dear _____ :

You helped to make the return of my first questionnaire 100 per cent. Thank you! The report is taking shape but I need your help again.

Dr. McKee Fisk who has come this fall to The Woman's College to direct the Secretarial Training Department is anxious that the report on which I am working shall include the commercial library facilities and also the extra services of our teacher training departments.

1. Will you please check if you receive these periodicals

Business Education World _____
 Journal of Business Education _____
 Balance Sheet _____
 N. E. A. Business Education Quarterly _____
 Business Education Digest _____
 N. A. C. T. T. I. Bulletin _____

2. Please circle the number of the Yearbooks which you have:

- a. Commercial Education Association of New York and Vicinity

1 2 3 4 5 6 7 8 9 10

- b. Eastern Commercial Teachers' Association

1 2 3 4 5 6 7 8 9 10 11 12 13

- c. National Commercial Teachers Federation

1 2 3 4 5 6

- d. Southern Business Education Association

1

3. Please give the number of volumes of commercial reference reading available for your teacher training students. _____
4. What extra services are rendered by your department, such as; conducting state contests, arranging for special conferences, etc.

Very truly,

Artelee Puett

COPY OF LETTER MAILED WITH SUPPLEMENTARY CHECK SHEET

April 5, 1944

Dear Sir:

For a research investigation undertaken at The Woman's College of the University of North Carolina, I am endeavoring to complete a study of the growth and development of business teacher-training facilities offered by the colleges of North Carolina up to 1940.

In order to do so, I shall need certain facts to complete the information about your college.

If you can possibly do so, I shall appreciate it if you will complete the enclosed check sheet as directed, and return it to me.

Very truly yours,

(Miss) Artelee Puett

SUPPLEMENTARY CHECK SHEET

(Name of College)

PLEASE

1. Check data if it is correct. .
2. Correct any data that is wrong.
3. Supply the missing data.

Please return to: Miss Artelee Puett
115 South Broad Street
Winston-Salem, N. C.

Date _____

COMPARATIVE DATA FOR FIRST YEAR AND 1939-40

<u>General</u>	Beginning Year	1939-40
College was organized in	_____	
College enrollment	_____	*1
College faculty (number)	_____	_____
<u>Business Department NOT including Business Teacher Training</u>		
Business courses were first offered in _____	_____	_____
Business student enrollment	_____	*2
Business faculty (number)	_____	*2
<u>Business Teacher-Training Department</u>		
Business teacher-training courses began in _____	_____	_____
Business teacher-training enrollment:		
Sophomore	_____	_____
Junior	_____	_____
Senior	_____	_____
Business teacher-training faculty (number)	_____	_____
Did the same faculty handle the regular business and the business teacher-training classes? Yes _____ No _____		

*1 Give numbers for the regular session.

*2 Total of 1-, 2-, and 4-year courses.

Signed

DIGEST OF REQUIREMENTS FOR HIGH SCHOOL TEACHERS CERTIFICATES
ADOPTED 1929 EFFECTIVE JULY 1, 1931

(Incorporating Modifications of Aug. 2, 1933)

The minimum scholastic training represents graduation from a standard four-year college. The subject, or subjects for which certification is granted appear on the face of the certificate. It is desirable that one be qualified to teach two or more subjects.

- I. The professional requirements common to all certificates are:

S. H.

- | | |
|---|---|
| 1. Educational psychology | 2 |
| 2. Principles of High School Teaching | |
| or | |
| Problems in Secondary Education | 2 |
| 3. Materials and Methods in one subject | |
| field | 2 |
| 4. Observation and Directed Teaching | 3 |
| 5. Electives | 9 |

- II. The academic requirement varies with the subject for which certification is granted. The minimum subject matter credit for the teaching of any subject shall be:

.

7. For Commerce

36 S. H.

This shall include:

- a. Stenography
- b. Typewriting
- c. Bookkeeping
- d. Office Management

Note: GENERAL PSYCHOLOGY WILL NOT BE ACCEPTED AS A PART OF THE PROFESSIONAL WORK ON ANY CERTIFICATE.

COLLEGIATE RESEARCHES
RELATING TO BUSINESS TEACHER-TRAINING FACILITIES

This bibliography is given for its possible value to other researchers in business teacher training. Sources of annotations are noted with titles.

Collegiate researches which cover business teacher-training facilities of the colleges and universities are included in this bibliography. Studies which deal with only a part of the program such as curricular offerings, directed teaching, or guidance programs are not included.

Bowen, Donald C., "The Preparation of the Commercial Teacher." Unpublished Master's thesis, Indiana State Teachers College, 1936. Abstracted Teachers College Journal, Vol. 7, page 131, July 1936. (Annotation received in a letter from the National Education Association of the United States, Associate Director, Research Division, May 11, 1940.)

Attempts to determine the standards required and the curriculum offered by state teachers colleges for the preparation of commercial teachers in the United States. Finds a great variation of opinion as to the necessary courses for a commercial teacher, irregularity in standards for courses in practice teaching, indecision as to the time for introducing various subjects into the commercial curriculum, and increasing importance of teaching economics, commercial law, and commercial geography.

Caperton, Virgil W., "A Survey of Commercial Education in the Educational Institutions of Higher Learning in Mississippi." Unpublished Master's thesis, Colorado State Teachers College, 1935.

Cleavinger, Eugene Hall, "The Opportunities for Teacher Training in Business Education on the Pacific Coast." Unpublished Master's thesis, University of Southern California, 1933. (Annotation from Paul O. Selby, Index to Collegiate Business Education. Kirksville, Missouri: Research Press, 1939. Page 4.)

Admission requirements, business teacher-training curricula, placement work; information from the college blue books, state educational directories, letters to state departments of education, bulletins, and a questionnaire sent to 18 institutions.

Cocanower, C. D., "A Study of the Commercial Teacher-Training Facilities of Ohio." Unpublished Master's thesis, Ohio State University, 1932. (Annotation of thesis by A. P.)

An attempt to determine: the preparation and experience of the present teachers of Ohio, the subjects taught, the schools attended, the curricula of the schools, the need of the teachers in the light of the positions they are to fill.

Selected findings. About half of the 380 teachers considered, began teaching in the commercial field, the others changed over to commercial after they had taught one year or more. Fifty-six per cent of the teachers had had commercial teaching methods. Commercial subjects most frequently taught were typewriting, bookkeeping, and shorthand. Thirty-one colleges and universities of the state are approved for teacher training in one or more fields. The prospective commercial teacher may take work at a school which does not offer work in commerce or commercial teacher training and then take the technical work at one of the nine approved business schools. The four-year commercial teacher-training course should be emphasized. Credit should be given for the courses in typewriting, shorthand, and bookkeeping.

Gardilla, Marion D., "Survey Study of Commercial Teachers and Commercial Teacher Training in New Jersey." Unpublished Doctoral dissertation, Rutgers University, 1934.

Graham, Jessie, The Evolution of Business Education in the United States and Its Implications For Business-Teacher Education. Doctoral dissertation, Southern California Education Monographs, 1933-34 Series, No. 2. Los Angeles: University of Southern California Press, 1933. (Annotation by A. P.)

An attempt to analyze the changing aims and curricula of secondary business education in the United States in order to discover the implications for academic and professional preparation of business teachers.

Selected findings. Professional training of business teachers is superior to that revealed in previous studies. Over two-thirds of the teachers answering the questionnaire reported that they had academic degrees. The median level of training of approximately 10,000 business teachers was more than four years of college education. One hundred thirty-eight degree-granting institutions in the United States engaged in business teacher education. In 69 per cent of the institutions, the college business teacher-training teachers were required to have a Bachelor's degree; in 17 percent of the colleges, the teachers were required to have a Master's degree, and in 2 per cent, the teachers were required to have a Doctor's degree.

Graham, Jessie, "The Present Status of Commercial Teacher Training in the Degree-Granting Institutions of the United States." Unpublished Master's thesis, University of Southern California, Los Angeles, 1929. Abstracted B. R. Haynes and Jessie Graham, Research in Business Education. Los Angeles: C. C. Crawford, University of Southern California, 1932. (Annotation by A. P.)

An attempt to ascertain the present status of business teacher training in the degree-granting institutions of the United States in order to evaluate the training and recommend improvements which seem to be warranted.

Selected findings. About 70 per cent of 685 institutions examined, offered business courses; about 20 per cent of the total

number offered business teacher training. State laws governing business teacher credentials showed that 31 states required less professional preparation of business teachers than of academic teachers. Only four states in 1928 demanded college graduation of teachers of business subjects. Commercial teachers should possess training broader than that represented by the acquisition of a few office skills. Suggested curricular requirements were set up.

Hagan, M. R., "Commercial Teacher Training As a Function of Universities." Unpublished Master's thesis, University of Illinois, 1931.

Hagemann, Mary Lee, "A Comparison of Commercial Teacher-Training Plans in Teachers Colleges and Universities in the North Central Association of Colleges and Secondary Schools." Unpublished Master's thesis, University of Iowa, 1938.

Hibner, Evelyn M., "The Status of Commercial Teacher Training in Ohio." Unpublished Master's thesis, Cincinnati University, 1939. (Annotated in Bibliography of Research Studies in Education 1938-1939, United States Office of Education, Bulletin No. 5, 1940, page 155.)

Studies curriculum requirements, practices in granting degrees, credit, methods and practice teaching requirements, and guidance in training commercial teachers in Ohio colleges.

Hoadley, Ruth, Status of Commercial Teacher Training in the United States. Master's thesis, Iowa, 1929, University of Iowa Monographs, First Series No. 9. Iowa City: University of Iowa, 1928.

Selected findings given in Chapter I of the thesis.

Iles, Thelma, "An Analysis of the Requirements for the Master's Degree in the State Universities." Unpublished Master's thesis, University of Tennessee, 1941. (Annotation by G. H. Parker, "Bibliography of Research Studies in Business Education in the South During the Past Two Years," Modern Business Education, May 1941. Page 27.)

A questionnaire study of all requirements for the master's degree in business education based on returns from 46 state universities.

Kelly, C. M., "An Analysis of Theories and Practices in the Preparation of Commerce Teachers in Teachers' Colleges." Unpublished Master's thesis, Colorado State Teachers' College, 1932.

O'Briant, Margaret Shepherd, "The Status of Business Education in Institutions with Chapters of Pi Omega Pi." Unpublished Master's thesis, Oklahoma Agricultural and Mechanical College, 1940.

Selected findings given in Chapter I of the thesis.

Palmer, Gertrude, "A Survey of Commercial Education in Nine Four-Year Colleges in Louisiana 1939-40." Unpublished Master's thesis, Louisiana State University, 1940. (Annotation by G. H. Parker,

"Bibliography of Research Studies in Business Education in the South During the Past Two Years." Modern Business Education, May 1941. Page 30.)

This is a study of business education on the college level in Louisiana for the purpose of showing the extent of business education in the nine four-year colleges in Louisiana; to determine the status of the teaching personnel in terms of such factors as educational background, teaching experience, business experience; and to discover the extent to which equipment, textbooks, and supplementary materials are used.

Pinkel, Ray B., "Status of Commercial Teacher-Training Facilities in the State of Pennsylvania." Unpublished Master's thesis, New York University, 1932.

Rogers, Joseph W., "Commercial Teacher Training in Louisiana." Unpublished Master's thesis, Louisiana State University, 1940. (Annotation by G. H. Parker, "Bibliography of Research Studies in Business Education in the South During the Past Two Years." Modern Business Education, May 1941. Page 31.)

This is a study of the commerce teacher training curricula and facilities in the public and private institutions of higher learning in Louisiana.

Shover, William G., Suggested Program for Commercial Teacher-Training Institutions. Doctoral dissertation, State University of Iowa, 1937. Appeared in condensed form in The National Association of Commercial Teacher-Training Institutions, Bulletin No. 14, February 1938. (Annotation by A. P. from the condensed form.)

An attempt to assemble available material regarding teacher training in business and to set up suggested programs for business teacher-training institutions with uniform standards in light of current research and philosophy.

Selected findings. The aims and objectives of business education have changed from a narrow professional education to one that includes, along with vocational skill, consumer-business and social-business training to meet the needs of the modern community life.

Almost no uniformity in the standards were found in regard to: certification of business teachers, entrance requirements of business teacher-training institutions, curricular offerings, business experience required of trainees, practice teaching, supervision of extra curricular activities, and majors and minors. The survey of the historical background, objectives, and theories indicated a need for uniform programs for business teacher-training on the undergraduate level based upon vocational-business, consumer-business, and social-business objectives of secondary education. The graduate curricula should be directed toward preparing teachers for certain specialized phases of business education.

Tarkington, R. N., State University Programs for Preparation of Business Teachers as Compared with Programs for Home Economics, English, and Social Science Teachers. Doctoral dissertation, New York University, 1938. Appeared in condensed form in National Association

of Commercial Teacher Training Institutions, Bulletin 18, October 1939.

Selected findings given in Chapter I of the thesis.

Vogel, Viola. "Status of Business Teacher-Training Facilities in Missouri and Adjacent States." Unpublished Master's thesis, University of Southern California, 1939.

Typist, Frances McQuarrie