DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN, 1925, No. 29

LAND-GRANT COLLEGE EDUCATION
1910-1920

PART V
HOME ECONOMICS

Edited by
WALTON C. JOHN
ASSISTANT SPECIALIST IN HIGHER EDUCATION
BUREAU OF EDUCATION

WASHINGTON
GOVERNMENT PRINTING OFFICE
1925

ADDITIONAL COPIES

OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C.
AT
15 CENTS PER COPY

CONTENTS

Part V.—Home Economics

FOREWORD

The subject of this bulletin, or Part V of the survey of land-grant college education, is Home Economics in Land-Grant Colleges.

The other sections, published separately, are as follows:

Part I. History and Educational Objectives of Land-Grant College Education.

Part II. The Liberal Arts and Sciences and Miscellaneous Subjects in Land-Grant Colleges.

Part III. Agricultural Education in Land-Grant Colleges.

Part IV. Engineering and Mechanic Arts in Land-Grant Colleges.

Part II contains three articles relating to Home Economics Education, namely: (1) The Arts and Sciences in relation to home economics; (2) The Liberal Arts in relation to the land-grant colleges; (3) The Sciences in relation to undergraduate land-grant college curricula.

LAND-GRANT COLLEGE EDUCATION, 1910–1920

PART V.—HOME ECONOMICS

Chapter I

SURVEY OF HOME-ECONOMICS EDUCATION IN LAND-GRANT COLLEGES

By HENRIETTA W. CALVIN

Former Specialist in Home Economics, U. S. Bureau of Education

At the beginning of the decennium 1910–1920 specialized courses in home economics were maintained in the land-grant institutions in the New England States, except Massachusetts and Connecticut; in New York, at Cornell University; in Pennsylvania, at Pennsylvania State College; and in all of the States north of the Ohio River and west of the Allegheny Mountains, excepting only the State of California. Home economics was also supported at the State Universities of Kentucky and Tennessee.

Women were not admitted—at least no special provisions for their education had been made—in the land-grant institutions of Massachusetts, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas.

GROWTH OF HOME-ECONOMICS DEPARTMENTS

During the decennium home-economics departments were organized in California, Massachusetts, Maryland, Georgia, and Louisiana. Delaware established a woman's college administratively connected with the State Agricultural College, and Florida encouraged home economics at the Florida State College for Women through which certain home-economics extension work was administered.

Up to the beginning of this period the home-economics education provided in the land-grant institution was theoretically directed toward preparation of women for their home activities. The training designed to prepare for teaching home economics was but incidental to the major objective, training for home administration.

Nevertheless, there were, at this time, large numbers of land-grant college graduates entering the teaching profession. There had been a general awakening to the need of home-economics instruction in public schools, and there were few other institutions of higher learning in which preparation for this profession could be secured; hence land-grant college graduates filled many teaching positions.

Most of the State universities, to which land-grant colleges were not attached, had, up to this time, ignored home economics as a part of women's education. Chicago University and Columbia University, with certain other privately controlled institutions, such as Mechanics Institute, Drexel Institute, Pratt Institute, and Stout Institute, were to some extent supplying the need for teachers of home economics. A small number of normal schools had entered the field, but the burden of supplying teachers in home economics still rested upon the land-grant colleges, though few of these supplemented the technical and scientific departments with strong departments of education.

RESEARCH

Up to 1910 little attention had been given by land-grant college women to the question of scientific research in home problems. It had been decided by the Director of Experiment Stations of the United States Department of Agriculture that experiment station funds could not be used in the maintenance of home economics research divisions. In spite of this prohibition research was being carried on by home economics departments through other recognized experiment station divisions. For example, in certain chemistry divisions of experiment stations cooperative research on flours and bread making was maintained with the home economics departments. Investigations in the methods of preservation of food were made by home economics departments in cooperation with bacteriology departments. Research in the cooking qualities of fruits and vegetables was established in connection with horticultural divisions, and studies in food costs and family living expenses were supported from general college appropriations.

A tremendous impulse was given to research in connection with problems relating to the welfare of the family by the conditions arising during the World War. The necessity for food conservation compelled additional investigations in food preservation, the use of certain of the less used edible food materials, and the effect of restricted diets on child growth and vigor.

The changed economic conditions incident to the war also stimulated research in personal and family expenditures, and the changed

social conditions made studies in labor saving methods and devices imperative.

Research in questions relating to family health and welfare; institutional management; the care and feeding of inmates of State eleemosynary institutions; satisfactory and economical preparation and use of certain farm products; social conditions affecting the family; and many other lines of investigation await encouragement in land-grant institutions.

An active part in experiment station work should be assigned to the home economics divisions in land-grant colleges, and the present decennium should be a period of marked advancement in research in home economics problems.

TEACHER TRAINING

Early in the decennium increased attention was placed upon teacher training for home economics positions. Not infrequently part of a college home economics staff was paid from the Federal appropriation granted to the States under the Morrill-Nelson Act. Previous to this time there had existed in certain States rather definite prohibitions concerning teacher training in agricultural colleges, especially in States where sharp rivalry existed between the agricultural college, the State university, and the State normal schools.

Such conditions in regard to teacher supply and demand developed in this period under discussion that whatever conflict had previously existed no longer limited the number of institutions that might aid in supplying adequately prepared teachers to the public schools of the State.

The Smith-Hughes Act directly affected home-economics teacher training in land-grant colleges. In most States the Federal money provided for teacher training in vocational home economics was allocated to the land-grant college. This made possible larger salaries for the home-economics faculty and also provided for increased personnel. Whereas previously teacher training had been incidental to other objectives of home-economics instruction, it now became the major objective in many land-grant institutions under the stimulus of Federal aid.

EFFECTS OF LEGISLATION

Another act of Congress directly affecting home-economics departments in land-grant institutions resulted in the establishment of home-economics departments in institutions previously noncoeducational. This act is known as the Smith-Lever Act for the encouragement of extension teaching. Before this time work for adult rural

women had been promoted in almost all of the States, through the Farmers' Institute Organization. Members of the agricultural college faculty had assumed the burden of farmers' institute work in addition to their campus duties. Some member of the college staff, or the State secretary of the board of agriculture, had acted as director of farmers' institute work. In many States the railroads had granted free transportation, and local farmers or farmers' organizations had met local expenses. In this way a considerable amount of the type of work now known as extension service had been rendered to rural communities.

With the establishment of Smith-Lever extension work it was possible to augment the home-economics staff in the land-grant college, and more adequately provide for this type of service. In most institutions the extension home-economics woman was directly connected with the teaching staff of the home-economics department, but in certain institutions she was recognized as a part of the extension division staff and correlated her activities with the teaching staff in the other department.

In the States where the agricultural colleges had not encouraged the attendance of women, and where specific courses in home economics had not been provided, difficulties arose in the administration of extension service in home economics. Furthermore, in such States there was no logical source of supply of home-demonstration agents. As a result of the Smith-Lever Act, and also as a result of a growing sentiment that the rural home as well as the farm should be served by the agricultural college, home economics was introduced, and young women students were welcomed into a number of agricultural colleges in which previously the special education of women had been ignored.

As a direct result of war activities, training for dietitian service became one of the leading lines in home-economics departments. At present, the higher incomes resulting from this type of service divert many would-be home-economics teachers from the teaching field into institutional positions. Because of certain developments during the war period, commercial concerns realized the value of expert advice in the manufacture of materials and machines to be consumed within the home. Hence, many home-economics women entered commercial organizations. For similar reasons a considerable number of leading publications catering to home women now employ home-economics trained women on the regular editorial staff and bid high for contributions from home-economics trained writers.

READJUSTMENT OF AIMS

As a result of the foregoing, the changes in the status of home-economics education in land-grant colleges which have developed during the decennium, are easily understood. Whereas, at the beginning the preparation for home life was the major objective and teacher training incidental, with no other service available, at the end of the decennium teacher training was dominant; dietitian and institutional management training was largely demanded; journalism courses in home economics became popular; students in research increased in number in many institutions; and the training for home life became incidental.

This readjustment as to aims should not be censured until a full recognition of the difference in the preliminary preparation of the entering students has been given due consideration. At the beginning of the decennium comparatively few high schools offered training in the arts of the household. At the close of the decennium more than 6,000 high schools gave instruction almost identical with that previously given in agricultural colleges.

FUTURE GROWTH

That the number of students enrolled in home-economics courses in land-grant institutions has not increased in the same ratio as in the previous decennium is easily explained. Since 1910 home-economics courses have been established in almost every State university and State normal school in the United States, and at the end of the decennium almost 600 institutions invited the prospective home-economics student. No longer must the girl desiring home-economics education go to an agricultural college. She may choose some other type of institution. Moreover, other curricula at the agricultural college are now made interesting to the woman student in the institution.

Teacher preparation, extension service, equipment for institutional management positions, education for magazine and newspaper writing, preliminary training for hospital service as dietitians, special education for social service as advisers in health and welfare work, and intensified scientific training for future research positions will continue to affect the quality and kind of instruction given in land-grant colleges.

With the changing economic and social conditions in the country, with the multiplication of labor-saving devices within the home, and the multitude of commercial products to be used by the home, it is difficult to foretell all of the changes that may occur in land-

grant college home-economics teaching in the present decennium. It seems safe to prophesy that much of the technical training necessitated by the lack of skill in students arriving at the college will now be abandoned, and the public schools will be depended upon to provide this part of women's education. Furthermore, it is reasonable to expect that the social sciences will play a more prominent part in the education of land-grant college women than heretofore, and that they may become the dominant lines in future courses. The handicaps realized by land-grant college graduates, owing to their somewhat inadequate academic training, need no longer exist, for the time spent upon the acquisition of skill may well be replaced by increased emphasis upon the so-called cultural studies, and upon the social as well as the physical and biological sciences.

Chapter II

DEVELOPMENT OF THE FIELD OF HOME ECONOMICS

By ISABEL BEVIER

Professor Emeritus of Home Economics, University of Illinois

Home economics has many phases. It touches life at many points. A consideration of the phases developed in the land-grant colleges implies a study of home economics as a factor in the liberal education of women. A review of some of the salient facts concerning their education may help to a better appreciation of the part played in that development by the land-grant colleges.

The New England colonists were never indifferent to the education of boys, but the early grammar schools and colleges were not open to the girls of the seventeenth nor even the eighteenth century. Harvard College was founded in 1636 and Vassar College in 1865. The general attitude of New England on the subject of female education, until about 1825, is fairly represented by the action of the Town Council of Gloucester, Mass., which voted "to give two hours of instruction to girls because they are a tender and interesting branch of the community but hitherto have been neglected." A Philadelphia divine of that period, in his "Letters to Young Ladies," names as desirable qualities to be cultivated, "cheerfulness, a genteel person, a simple nature, delicacy, good manners, skill in fancy work, and a fund of hidden genteel learning." It is well perhaps to recall the names of Anne Hutcheson, Abigail Adams, and Susan B. Anthony as proof that something more than a "fund of hidden genteel learning" was needed to satisfy some women even in that day.

Among the contributions made to the education of women by women three names stand out clearly: Emma Willard, Mary Lyon, and Catherine Beecher. Under their guidance education for women took a definite shape. Mrs. Willard pleaded for State support and the all-round education. She taught, wrote, spoke, and was, as President Thwing says, "for 30 years the representative woman of her generation." Mary Lyon lived for the glory of God and considered education necessary. In order to save expense in securing it she devised the scheme for Mount Holyoke now known as "cooperative housekeeping." Catherine Beecher, with peculiar insight,

touched on the essentials in education for the home. She said it must be put on a scientific basis and studied as other sciences. She preached her doctrine in many parts of the country, wrote, and was instrumental in organizing the American Woman's Educational Association, whose purpose was to "aid in securing to American women a liberal education, honorable position, and remunerative employment," or, in the vocabulary of to-day, economic independence for women.

In the next decade little progress was made in education because the energies of both men and women were occupied in civil strife, but the leaven was working. Academies, seminaries, and public schools had made the public familiar with the idea of coeducation, which found expression in Oberlin College in 1833 and later at Antioch, Ohio, so that by 1865 several points seemed to be settled concerning the education of women: First, that it was a factor not to be overlooked in any educational scheme; second, that something more than "morals and manners and genteel learning must be offered them"; third, that coeducation was a safe experiment and particularly valuable from the economic standpoint; fourth, that the work at Mount Holyoke was succeeding and that a college for the higher education for women—Vassar—was about to be opened; fifth, that the pioneer life had made necessary comradeship in education.

This was the status of education for women at the time of the opening of the land-grant college. This organization marked a new epoch in the world's educational history. The land-grant colleges were at once a protest against the narrowness of the classics alone, a plea for breadth in education, a challenge to connect education with the daily life and occupations of the people, a demand for the study of science that it might be applied to the problems of the farm and the mine. Men of courage and of vision have persistently declared that a democracy demands that all the children of all the people must be educated.

The records show that a great number of the land-grant colleges were founded in the decade from 1865 to 1875, and that almost all of those in the West were open to women. Therefore, the process by which "that tender and interesting branch was to be transformed into women" was begun. Comparatively few of the people of that day had any conception of the far-reaching results of this open door in the education of women. These pioneer women gave themselves gladly to "keeping step" mentally with the men. That task being accomplished, they looked for other fields to conquer and slowly but surely the truth dawned upon them, that they might find some applications of science in their own domain, that chemistry and bacteriology could be applied in the preparation of food. The laws of heat

could be illustrated by the kitchen range as well as by the steam engine. Thus was a beginning made in the science side of home economics. The art developed later. By 1910 there were proofs on every hand of the greatness of the contributions of the land-grant colleges to the education of women. Briefly, some of them may be enumerated as follows: The privilege of an open mind toward education; a willingness to try experiments; financial support; equipment; the spirit of service; the recognition that the needs of the people were to be considered in their selection of work and that the results of their studies were to serve the interests of the State; the scientific basis in the study of household problems.

The value of such an education was recognized not only by the women themselves but by leaders in the educational world. President Eliot said at the twenty-fifth anniversary of the Collegiate Alumnæ Association:

> It used to be said that women could not stand the physical strain of a college education, that mentally they could not keep pace with the men; that their morals and manners would suffer. Having proved that these charges were untrue it would seem that they might give their attention to developing lines of work of peculiar interest to women.

United States Commissioner Brown said:

> It has taken a great struggle to establish fully the higher education of women as a simple human need. The integration of woman's education with the general scheme of education has been brought about. But the differentiation of woman's education is yet to be accomplished. Some practicable scheme of education for mother work will, we can not doubt, be devised in the course of time. There will be, some day, an education for homemaking, and for woman's leading part in the finer forms of social intercourse, which will do on the higher and academic plane what was done in a more petty way generations ago in popular finishing schools for girls, but this, too, is only a part. There is to be further a serious preparation for woman's rôle in the economic, the industrial, and even in the political world.

Home economics in 1910 had attained an honorable place as an important factor, not only in land-grant colleges, but in many types of educational agencies. Its advocates had formed the American Home Economics Association, and founded the Journal of Home Economics, whose pages were recording the steps in what may be called the internal development of the subject. It was no small undertaking to develop courses of instruction adapted to different types of schools, to decide upon the basic and related subjects, to give due proportion to each of the main divisions. Committees worked diligently to get the subject matter into pedagogical form that it might take its proper place in the curriculum. In this connection mention ought to be made of the invaluable services of the United States Department of Agriculture, of Mrs. Ellen H. Rich-

ards, and the faculties of the land-grant colleges. They had in a sense been "over the way" in planning courses in agriculture, and so knew the difficulties and dangers of the journeys. The report of the Secretary of Agriculture for 1909 contains the statement that the Director of Experiment Stations has spent some time in developing a four-year college course in home economics. This same department gave invaluable aid in the preparation of a syllabus of home economics. The science side of home economics was the first to be emphasized, largely because of the universal interest in food and of the literature on nutrition and other phases of the food work which had been prepared by the Department of Agriculture; but the importance of the social and artistic sides of the subject were soon recognized and given due attention.

The year 1914 is a memorable one in home economics because in that year the Federal Government inaugurated extension service in home economics by means of the Smith-Lever law. That law provided the machinery for carrying the information from the college to the women in the farm home. It not only opened new opportunities for service, new methods of testing the value of home economics, but also marked an epoch in education because it is the first definite provision on the part of the Federal Government for a scientific study of the problems of the home. It was a recognition by the Government and land-grant college that the value of farm life could not be estimated by the numbers of its flocks and herds or by the value of its crops alone, but must also consider the kind of life maintained in the farm home. And so another great door of human betterment was opened, another chance was given for men and women to work side by side, in the world's problems. To establish machinery by which the latest scientific information concerning the problems of their daily life may be carried to the women throughout the length and breadth of the land is a magnificent achievement. The value of this machinery was demonstrated on a large scale in the World War. Under the emergency fund women trained in home economics were placed in cities and country to carry to the people the instructions of the Food Administration.

Other steps in the recognition of home economics during this period are: The addition of two women trained in home economics to the staff of the United States Bureau of Education; the reorganization of the United States Department of Agriculture, leading to the establishment of the Office of Home Economics (really an expansion of the earlier work in nutrition); and later, the creation of a division of home economics in the Association of Land-Grant Colleges.

By 1916 the foundations of home economics may be said to have been fairly well settled in the college curriculum; the appreciation

of the public assured and beginning to be intelligent, and extension work fairly well begun. And then the World War broke out.

Because of the importance of food to the soldier, agriculture and home economics worked hand in hand to meet the Nation's need; the one in the line of production, the other in conservation by the wise use of materials. It is safe to say that the people of the United States as a whole learned more of one phase of home economics in one year in war time than they had learned in any five years before. Calories were taken from the funny column of the newspaper to be used as the measuring unit of the world's resources in food. At home, literally hundreds of women trained in home economics demonstrated the conservation of food, while in the hospitals abroad they worked against fearful odds to give food and courage to the soldiers.

The world having learned the value of home economics in time of war was unwilling to abandon it in times of peace. Many new lines of effort were open to women; dietitians were asked for by hotels as well as hospitals; women trained in the problems of the home were sought by banks as well as by commercial firms to help in teaching thrift. The Child Labor Bureau, the Red Cross, and the Public Health Service called persistently for women trained in home economics. Economic results of the war in relation to wool and cotton put emphasis on the questions of clothing and furniture usually reached through the art side of home economics. Questions of all sorts and kinds about processes and products of every kind cried aloud for research.

All these calls meant a revaluation of the training to be offered in courses in home economics. The pressing need of the hour is that women may know and practice business principles as spenders of the income of the family. Everybody must know more about the relation of food to health. The dietitian must understand better the implications of the diagnosis of the physician, and the beauty of life must be brought into all lives to relieve sordidness and satisfy the longings of the spirit.

In the midst of these endeavors another responsibility was added to home economics by the passage of the Smith-Hughes law. This law deals with the subject of vocational training and touches directly the problem of home making as a vocation. In most cases the home-economics department in the land-grant colleges was designated by the Federal Board for Vocational Education as the place for the training of teachers in vocational home economics.

The home-economics workers are now in the throes of their reconstruction period. They have the satisfaction of knowing that they are part of a large company seeking a new and better way of life

and service. They have also the courage born of achievement. Those who know the dangers and difficulties by which home economics has reached its present position have no fears for the ultimate success of its future.

To summarize: Home economics in the land-grant colleges during the past decade has proven that it is a valuable agency in the liberal education of any woman. It has demonstrated the value of the applications of science, art, and economics to the problems of the home. Its study means not only special knowledge in particular lines, but a scientific study of the woman's part in the larger problems of life. By virtue of its association with the work of the land-grant colleges it has had large opportunities to contribute to the Nation's need in both war and peace. Its specialists are contributing directly to the relief of the present economic difficulties by teaching a wiser use of the world's commodities and a better appreciation of the social and industrial relationships of life.

Commissioner Brown's prophecy, uttered at the beginning of the decade, is being fulfilled. There is even now a training for women in mother work and in the finer forms of social intercourse; there is also serious preparation for the participation of women in the economic, industrial, and even the political world. This training is to be found in the offerings of home economics in the land-grant colleges.

So much for home economics in the land-grant colleges in the past decade. What of the future? The land-grant colleges will doubtless secure larger appropriations. There will be more investigations in wheat, meat, cotton, and wool. The land-grant colleges will work at the problems of food because the demand is so insistent, but there is need for them to work on four widely different lines—research in art, shelter, social, and economic relations.

The land-grant colleges, in addition to strengthening and deepening the scientific basis for the study of the home, must undertake to teach something more of art and beauty as developed in the social and economic aspects of our common life. They must send forth men and women who will be eager and able to use their knowledge of and skill in the practices and principles of the arts of the home as a means of expression for their best endeavors, and so enrich life not only in material ways but also in the finer and less tangible things of the spirit.

Chapter III

CHILD WELFARE

By Abby L. Marlatt

Professor of Home Economics, University of Wisconsin

In 1840 Miss Catherine Beecher published a Treatise on Domestic Economy, which contained a chapter on the care of infants. This chapter was used in schools for women in the Eastern States.

In Berlin, Germany, the Pestalozzi-Froebel-haus very definitely taught its pupils the details of the care of the child. This plan was mentioned in the 1873 report of the United States Commissioner of Education, in the discussion as to the wisdom of offering practical courses in home management as part of the college class work counting toward the degree.

While the Holyoke plan of requiring students to work in dining room, kitchen, and pantry for two hours a day had been followed in Iowa State College, the actual course was not opened until 1875. This work included lectures on the "care of the sick, care of children, management of help, dress, etc.," physiology and chemistry being "taught as a part of the course in domestic economy."

The work in Kansas State Agricultural College, while started in 1873–74, was not thoroughly under way until 1882, when Mrs. Nellie Kedzie (Jones) was appointed professor of home economics. She included a full lecture course in hygiene, child development, and care before and after birth.

Definite organization for child-welfare work originated in Europe in 1908, and was inaugurated in the United States through the committee of the American Academy of Medicine for the study and prevention of infant mortality, by the president, Dr. Helen C. Putnam. Its first meeting was held in New Haven in November, 1909. Out of this first meeting developed the American Association for the Study and Prevention of Infant Mortality, which continued under that title until 1918, when it was changed into the American Child Hygiene Association.

The studies of the association are largely responsible for the establishment in 1912 of the Children's Bureau in the United States

Department of Labor. Studies and publications of this bureau have formed the basis for much of the child-welfare work in the United States and especially in the land-grant colleges through their courses in home economics.

State and National interest in child-welfare work before 1910 is represented by the epoch-making study of M. W. Shinn, The Biography of a Baby, published in 1900. This study dealt entirely with the mental development of the child, but served to arouse interest in child psychology. In infant nutrition another study was published by Jaffa, of California, as early as 1896.

Before 1910 very few of the land-grant colleges had offered courses specifically in the field of child welfare. All of them had courses in nutrition, dietetics, home nursing, and house management, and many had courses in child psychology. In the extension work of the colleges, more was done in child care and child training as the demand from the mother was for help in this particular phase of child welfare.

Following the Baltimore meeting of the Association for the Study and Prevention of Infant Mortality, the child-welfare exhibits were sent over the United States, both in the North and in the South. The New York child-welfare committee aided in this type of work. These exhibits aroused interest in local courses in child care.

In securing data as to the present status of child-welfare work in the land-grant colleges 45 questionnaires were sent out and 32 replies were received. Two institutions reported courses that dealt with child-welfare work as having been started before 1910. One of these was the State College of Washington, which reported a course in home nursing that included two lectures by a local physician; and the other was the University of Wisconsin, which in 1909 inaugurated a senior course relating to the child from before birth through adolescence. This latter course, called "humanics," is the only early one that has been wholly devoted to the field of child-welfare work. Much of this has appeared in connection with the outline for the study of child care, prepared by Doctor Mendenhall for the Children's Bureau and the Federal Board for Vocational Education.

A series of lectures on child care, child psychology, and child training have been given by temporary instructors in one of the eastern colleges and in the Middle West. Minnesota has offered a course in child training since 1918, but the majority of colleges give child care as part of the course in home nursing.

In many instances those who replied to the questionnaire stated that they expected to develop the child-welfare work further or to inaugurate new courses which would deal directly with the subject.

Five reported that courses in this subject were given. Only 11 offer distinct courses in child care, 6 in child training, 5 in nutrition of infants and children, and 2 on the family. Practically all have courses which in some part deal with the subject of child welfare. These are listed under the head of nutrition and dietetics, home nursing, children's clothing, child psychology, house management, social problems, with field work in orphanages and health centers and field work with public schools and public welfare associations.

Part of these college courses are given by the local physicians, the kindergarten training department of the schools of education, the instructor in dietetics, a trained nurse, the instructor in sociology, the instructor in home management, or by the director of the course.

Some of the States are offering courses in the department of education which distinctly correlate with the courses in the home economics department of the college of agriculture. These include psychology of exceptional children, as well as correction of speech defects and courses in child psychology.

In departments of sociology the related subjects of case work bring in child-welfare work. In a few colleges the child-welfare case work forms a part of the senior and graduate work in the home economics course.

In 1914 the first mother-craft school in England was established. This school was the inspiration for the establishment of mother-craft courses in the United States, the first being at the Utah Agricultural College in 1917.

Later development in the form of nursery schools in England led to the establishment of a nursery school in connection with the Merrill-Palmer School in Detroit. In this school, in January, 1922, six seniors from the Agricultural College of Michigan were detailed to take the course in child psychology and child management, using the nursery school as a laboratory. The course of study covers three months, and the students are given college credit for the completion of the work, which includes courses in child psychology and child management, with laboratory practice in the diet kitchen of the school, and a course in social work as applied to children, and field work in connection with social agencies.

Since the inauguration of the Children's Bureau in 1912, the States have developed child hygiene bureaus. Up to 1917 only five had such organizations in the State departments. To-day most of the States have these in connection with the State boards of public health. Through cooperation with the extension work in home economics in practically all of the States the movement has spread

rapidly. The extension specialist gives the nutrition work; and the county nurse, the Red Cross nurse or the nurse acting as home economics specialist gives the course in child care, including the weighing and measuring and examination for defects. Many of the home economics nutrition specialists are developing nutritional clinic work in connection with the field work of the child hygiene bureau.

To meet this demand for trained specialists in child nutrition a few of the land-grant colleges have taken babies into the practice cottages. Minnesota and New York were the pioneers in this endeavor. Arizona, Colorado, Oregon, and Oklahoma report the care of infants in the practice cottages in connection with the house-management laboratory work. There is a divided opinion as to the value of this form of child-welfare training. For this reason many of the institutions hesitate, fearing to place the child in a practice cottage where the effect of change of pseudomothers must at best be bewildering.

In most colleges the work in child welfare is generally included as a part of the four-year curriculum and is given in connection with courses in clothing, food, dietetics, housing, the family, social case work, and in child psychology. These courses form the basis for material to be used in the homes of the country. By such efforts are reached at least 80 per cent of the college women who eventually make homes of their own.

The research studies in nutrition, beginning with work with the lower animals, such as rats, guinea pigs, mice, rabbits, and puppies, are found in the larger colleges of the land-grant group. They are elective courses in the food major, and are definitely planned for the senior student, who thus gains technique for graduate studies in nutrition, with special reference to welfare work with babies, the preschool child, and the school child.

The land-grant colleges which are also State universities, including a medical college, have the added advantage of allied courses offered in medicine and laboratory work in nutrition clinics. This later development of nutrition clinic work in connection with the public schools or health centers as reported by four typical colleges in the East, the South, and the Middle West are worthy of investigation and imitation. These courses are very definitely offered to those interested in going on with the work in public welfare organizations; in social service work in institutions and factories; in housekeeper work in connection with State and private organizations; in children's hospitals where the nutrition phase of the work is definitely studied; as dietitian in private clinics; and as part of the work in training the home demonstration agent and the nutrition extension specialist for field work in cooperation with the rural schools and farm homes.

Chapter IV

NURSING AND PRENURSING

By AGNES FAY MORGAN

Chairman of the Department of Household Science, University of California

---

The crude beginnings of the attempt to give some foundation of knowledge and technique to those who care for the sick go back no further than 60 years ago. Certainly the first definite acceptance of responsibility in this field by American higher institutions of learning can not be placed earlier than 1899, when the Teachers College of Columbia University offered a course in "hospital economy." In 1910 the first university course in public health nursing was offered by the same institution, and in the following eight years many others followed this example. The first university to establish a school of nursing parallel with other schools was the University of Minnesota, which took this important step in 1909. A number of other institutions have since that time developed various means of aiding in the progress of this type of education.

Since the object of this article is to trace the development of all phases of nursing education as they have occurred in the land-grant colleges, the types of contribution to this field must first be enumerated. These are as follows:

1. Professional training schools in connection with university hospitals and medical schools.
2. Courses and curricula for the further training of graduate nurses.
3. Assistance in choice of studies for students who plan later to leave the university or college in order to enter a hospital training school.
4. Combined academic and professional courses, leading to the degree from the university or college and diploma from a hospital training school.

1. Three-year professional curricula.—The first of these forms of instruction to develop in the land-grant colleges was that of the professional training school.

In four institutions, Missouri, California, Minnesota, and Nebraska, professional nurse training schools are maintained in connection

with the hospitals and medical school. In each case there has gradually developed side by side with these training courses one or more of the more closely organized curricula which combine the advantages of the long-established academic type of instruction with the practical work of the hospital. Even in the so-called strictly professional three-year courses of study in these institutions, certain evident advantages of faculty, clinics, laboratories, etc., accrue beyond those usually found in hospital training schools not attached to a university. A summary of facts about these courses is given in Table 1.

It would appear that the professional training of the nurse, as it has developed in the foregoing four land-grant colleges, has followed the usual pattern of the three years' course devised by the training schools which are dependent upon hospitals for their support and equipment. The fact that in each of these four cases the hospital is primarily a teaching unit, and that it is controlled by a school of medicine, has added considerably to the value of both the instruction and the practice afforded the student nurse. In all cases, however, the usual eight hours daily ward duty seems to be required; board and lodging and sometimes a small fee are provided; and because of physical separation or of exacting hospital service no direct relation with the academic departments of the university exists.

The type of instruction offered these students may be indicated by the following curriculum, taken from the announcement for 1922-23 of the school of nursing of the University of California:

TABLE 1.—*Three-year nursing curriculum, University of California*

[Hours in the various subjects—Arrangement of studies]

Subjects	Class	Laboratory	Total hours	Units
FIRST YEAR				
First half				
Nursing procedure	48	48	96	4½
Anatomy and physiology	48	16	64	3½
Chemistry	16	16	32	1½
Nutrition and cookery	16	16	32	1½
Hygiene	12		16	1
Oral hygiene	4			
Bacteriology	16	16	32	1½
Surgical technique	8		8	½
Bandaging	8	16	24	1
Drugs and solutions	8	16	24	1
Talks to preparatory students	8		8	
Total				16
Second half				
Nursing in surgical diseases	16		16	1
Nursing in medical diseases	32		32	2
Materia medica	16		16	1
Laboratory technique	6	4	10	½
History of nursing, I	8		8	½
X-ray technique	8		8	½
Total				5½

TABLE 1.—*Three-year nursing curriculum, University of California*—Continued

Subjects	Class	Laboratory	Total hours	Units
SECOND YEAR				
First half				
Communicable diseases (including tuberculosis and venereal)	16		16	1
Pediatrics, I (infant feeding and diseases)	16		16	1
Obstretics and gynecology	16		16	1
Massage and physiotherapy	4	12	16	½
Anatomy of nervous system	4	2	6	
Diseases of nervous system and nursing in neurology	4		4	¼
History of nursing, II	8		8	½
Diet in disease	16		16	1
Total				5½
Second half				
Ophthalmological nursing	8		8	½
Otolaryngological nursing	4		4	¼
Nursing in urology	8		8	½
Nursing in dermatology	4		4	
Radium therapy	4		4	¼
Orthopedics nursing	8		8	½
Pediatrics, II (2 years to adolescence)	16		16	1
Invalid occupation	16		16	1
Professional problems and opportunities, I	8		8	½
Total				4½
THIRD YEAR				
First half				
Nursing in mental diseases	16		16	1
Professional problems and opportunities, II	8		8	½
Seniors' club	8		8	
Total				1½
Second half				
Seniors' club	8		8	½
Hospital and nursing school administration	8		8	½
Emergency and first aid	4		4	
Total				1
Grand total				34

It will be readily observed that in spite of the enlightened character of the foregoing schedule, as compared with many present and past plans in other schools of nursing, the instruction given is still largely of an empirical and didactic nature, and calculated to produce the technically experienced and disciplined nurse rather than a thinking aid to the physician. It may well be that this choice of training is wise, and indeed may parallel certain kinds of instruction found in other departments of the land-grant colleges, but its limitations for ambitious and original students must be recognized. One of the facts which may contribute to the maintenance of this type of training is the almost universal employment of graduate nurses as instructors in these schools. The progressive schools of medicine and public health have long ago recognized that the skilled but unspecialized M. D. has only a limited place in their faculties, but the training schools for nurses seem in general not to have attained as yet any similar conviction.

TABLE 2.—*Three-year professional training course for nurses in land-grant colleges*

	University of Missouri	University of California	University of Minnesota	University of Nebraska
Year installed	1901	1907	1909	1917.
Type of training hospital.	General teaching	University hospital, general teaching.	University hospitals, general teaching.	University hospital, general teaching.
Number of beds	50	280	200 150 700	130.
Control	Medical school of university.	University	University, in case of Elliott Hospital only (200) beds.	University.
College credit	60 units toward degree.			University credit, unit for unit.
College in control of course.	Medical	Medical	Medical	Medical.
Entrance requirements, age (years).	19–30	18–35	20–35	19–35.
Educational requirements for entrance.	4-year high-school graduation.	4-year high-school graduation.	4-year high-school graduation.	4-year high-school graduation.
Fees	$25 per term	None	$40 for first half year.	None.
Compensation	Board and room	Board, room, and laundry, $7 per month.	Board and room	Room, board, laundry, and books.
Hours of ward duty	Not stated	8 hours daily	8 hours daily	8 hours daily.
Certification	Certificate in nursing.	Diploma from school of nursing.	Degree of graduate in nursing.	Diploma of nursing.
Average yearly enrollment.	5	22	22	7
Number of graduates	44	160	128	

2. *Public health or other courses for graduate nurses.*—Three land-grant colleges have established courses for graduate nurses. Nearly all these courses are planned to afford training in preparation for public health nursing. In Table 3 full details are given.

TABLE 3.—*Courses for graduate nurses in land-grant colleges*

	University of California	University of Minnesota	Ohio State University
Year established	1917	1918	1917.
Requirements for entrance.	Graduation from high school and school of nursing and registration.	Graduation from high school and from approved school of nursing.	Registered nurse, and high-school graduation.
Length of course	9 months	8 months	30 university credits, 1 year (2 different curricula).
Certification	Certificate in public health nursing from the department of hygiene.		Certificate in public health nursing from college of medicine.
Average number enrolled yearly.	30	36	3.
Curricula	Public health nursing: Lectures, 11 units per semester; field work, 18 hours weekly throughout the year.	Public health nursing: Visiting, infant welfare, school inspection, rural nursing, largely field practice.	2 curricula offered: Public health nursing and teaching in schools for nurses.

There are regulations in several States requiring a certain amount of postgraduate study of public health problems by nurses before they can be employed by municipal, county, or State health agencies. It is for such training that the University of California established

its curriculum for public-health nurses, and for similar reasons there were established similar curricula for graduate nurses by Ohio State University and the University of Minnesota. The University of Wisconsin, through its extension division, is carrying on training of this kind, chiefly in Milwaukee, but without the same direct connection with the university proper which is so valuable a feature of the course in the other institutions mentioned.

There can be little doubt of the usefulness and probable rapid growth of this type of instruction in the land-grant colleges. The question of coordination of the professional training of these nurses with academic standards of undergraduate instruction will have to be faced, however, before any permanent footing for these special curricula can be attained. It is to be hoped, of course, that in time the ranks of public-health nurses will be recruited more largely from among graduates of the combined professional and academic courses already established in a number of colleges and universities. Postgraduate curricula for such nurses might be of a truly advanced as well as practical character.

In most cases, at present, it would seem that the courses organized for graduate nurses are of special character, not open to other students, and that the nurses are frequently admitted to the colleges as special students. The late tendency of the larger institutions toward elimination of special courses and special admissions may effect a change in these curricula in the direction of greater uniformity with already existing academic standards.

3. *Curricula for prenursing students who may later leave the university or college to enter a training school for nurses.*—Four of the land-grant colleges which do not offer either professional or combined academic and professional courses for nursing students have developed so-called prenursing curricula which serve for the guidance of students who may later wish to enter a nurses' training school.

Table 4 gives full details of these courses.

The arrangement announced by the University of Wyoming differs from the others in that a full three years' professional course is open to students who desire to enter the local hospital training school for that purpose. There is, however, no control by the university over the other parts of the training not included in the 16 units of work offered in regular course for these students, and taken by them during their residence in the hospital training school. Although it is stated that the diploma given at the end of this professional course is issued by the regents of the university, jointly with the hospital authorities, the actual influence of the university upon the training school would appear to be rather slight.

The outline advised at the University of Kentucky and at the Montana College of Agriculture grew out of the 12 weeks' preparation offered in 1918 for entrance to the Army School of Nursing, and on its request, by many higher institutions.

No definite arrangement for credit for this work at any hospital training school other than the Army school appears to have been made by the University of Kentucky, but the Oklahoma and Montana colleges reported cooperation by prominent hospitals in those States, not named individually, however, in the announcements.

TABLE 4.—*Prenursing curricula in land-grant colleges which have no school for nurses*

	University of Kentucky	Montana Agricultural College	Oklahoma Agricultural and Mechanical College	University of Wyoming
Year instituted	1918	1918	1915	1916.
Length of suggested course.	1 semester	1 year	1 year	1 semester.
Curriculum	Anatomy and physiology, bacteriology, chemistry, hygiene and sanitation, nutrition and cookery, psychology; exact courses and credits not specified.	Quarter credits: English composition, 3; modern history, 6; chemistry, 12; bacteriology, 5; zoology, 6; physiology and anatomy, 6; organic chemistry, 6; foods, 3; dietetics, 4; physical education 6.	Semester credits: bacteriology, 4⅓; physiology, 3⅓; chemistry, 8; zoology, 4⅓; dietetics, 3; food study, 6.	Semester credits: physiology, 6; chemistry, 2; food study, 2; bacteriology, 3; dietetics, 2; sanitation, 1.

4. *Combined academic and professional courses leading to the degree from the university or college and diploma from a hospital training school.*—Seven of the land-grant colleges have announced or have in operation a combined course, in all cases five years in length, in which the professional training of the nurse and part of the undergraduate academic course are offered together in satisfaction of degree and diploma requirements. Apparently all of these courses found their origin in the war emergency, since none of them were begun earlier than 1917. A brief outline of the division of time and credit between college and hospital, as arranged by these seven institutions, is given in Table 5.

RELATION OF TRAINING SCHOOL TO COLLEGE

It is plain that much of the value and permanence of this type of instruction will depend upon the effectiveness of cooperation between the hospital training school and the college. The traditions and ideals of the college and of the nurses' training school are not alike in any respect, and the combination of these two diverse units into a harmonious whole for the production of scientifically and practically trained nurses will be effected only after carefully re-

strained experiment and experience. That the dominating influence should be the college rather than the training school will probably be admitted, but the mechanism of dominance, without destruction of the valuable spirit and contribution of the latter institution, remains to be worked out.

In those cases in which the hospital is owned and controlled by the university there would appear to be the best chance of such a close organization. Duplication of theoretical instruction and overemphasis upon routine practice in the care of the sick may be avoided more effectively in these institutions.

TABLE 4.—*Combined academic and professional training for nurses, as developed in land-grant colleges*

College	Year course was established	Average yearly enrollment	Course— In hospital		Course— In college		Degree or certificate	College or departments in charge
			Time	*Units*	*Time*	*Units*		
University of California	1917	12	2 yrs	24¾ sem. units	3 yrs	96 sem. units	B. S., and certificate in nursing.	College of letters and sciences, and school of medicine.
University of Minnesota	1919	8	2½ yrs		2½ yrs	135 quarter units	B. S., and graduate in nursing.	College of science, literature and arts, and school of medicine.
Ohio State University	1917	3	2 yrs. 4 mos	53 sem. units	2 yrs., 8 mos	95½ sem. units	B. S., and diploma in nursing.	College of medicine.
University of Nebraska	1918	4	3 yrs	28 sem. units	2 yrs	97 sem. units	A. B. or B. S., and nursing diploma.	College of arts and sciences; college of medicine.
Kansas State Agricultural College.	1921	4	2 yrs	34 sem. units	2 yrs	102 sem. units	B. S. in home economics; diploma in nursing.	Division of home economics; Charlotte Swift Hospital.
Washington State College.	1918	4	2 yrs		3 yrs	60 sem. units (154 required for degree).	B. S., and certificate in nursing.	Hospital.
University of Missouri	1920	10	3 yrs	None stated	2 yrs., 4 mos	60 sem. units	60 hours credit and certificate in nursing.	College of arts and sciences, college of medicine.

The Universities of California, Minnesota, and Nebraska are so far the only land-grant colleges which have nurses' training schools located in their own teaching hospitals. A rather close relation between the hospital training school and the college seems to exist at the University of Missouri, Ohio State University, and Kansas State Agricultural College, although there is no direct control exerted by the college in any of these cases. Washington State College has apparently so far no definite arrangement with any one hospital for completion of the professional training of students in the combined curriculum.

COLLEGE COURSES OUTLINED

The course outlined for the first two years in all cases spent at the college is substantially the same in all the institutions listed. Courses in chemistry, anatomy, physiology, bacteriology, foods and nutrition, zoology, economics or sociology, and psychology are required in all seven colleges, and in addition usually a certain amount of English, foreign language, and history. A striking feature of this part of the curriculum is the rigidity of prescription, which allows practically no election, except at the University of California, where 19 units out of the 2½ years' courses are elective.

DIVISION OF TIME BETWEEN COLLEGE AND HOSPITAL

The division of the students' residence between college and training school is rather sharply maintained in most cases. This is made necessary, in some cases, because of physical distance between the two institutions, as at the Universities of California and Nebraska, and in others, as at Kansas State Agricultural College, Washington State College, and the University of Missouri, by separation of control. Ohio State University has attempted a more closely interwoven division of the student's time by using all summer vacation periods throughout the five years for hospital practice, and by dividing each of the third, fourth, and fifth years between college and hospital. Part of the fifth year in several of the other colleges is assigned to specialization in some branch of nursing, and for this purpose a certain amount of election in college subjects is prescribed.

NONPROFESSIONAL OR HOME-NURSING COURSES

Practically all of the land-grant colleges which support departments of home economics offer courses of one to four units credit in home nursing. Such a course was begun in 1905 at Washington State College; in 1907 at Purdue University; in 1909 at Utah Agricultural College; in 1910 at Kansas State Agricultural College, at Montana College of Agriculture, at North Dakota and Oregon Agricultural

Colleges. Most of the other colleges announced this course first in 1916 or 1918.

In a few cases the work is given by a nurse or physician. In the majority of colleges, however, the instructor is a member of the department of home economics. There is usually no prerequisite stated, although in a few cases courses in bacteriology or physiology are required. The course is prescribed in many institutions for all junior or seniors in the curriculum in home economics.

There appears to be no relation between such nonprofessional work and professional nursing or prenursing courses in the same institutions. The object of the home nursing course is clearly amateur, and infringement upon the professional nurse's field is usually expressly disclaimed. A question may arise in the mind of one who examines the announcements of these courses as to their substance and suitability for a place in the senior year of a college course. With no required scientific preparation, and with a casually assigned instructor, such courses may and sometimes do present only a thinly scattered semblance of mental pabulum.

NURSING COURSES IN THE LAND-GRANT COLLEGES FOR NEGROES

Four of the land-grant colleges for negroes have developed professional nurse-training courses. The first established was that at Alcorn (Miss.) Agricultural and Mechanical College in 1905, the Scudder Infirmary for Students being used for hospital practice. About five pupil nurses are in training usually; there are 22 graduates, and a four-year course is outlined. Only five hours daily ward duty is required, and it is assumed that some academic work of a secondary character is carried by the pupils throughout the course. A similar course of training in its student hospital was begun by the Florida Agricultural and Mechanical College for Negroes in 1910. The Prairie View State Normal and Industrial College of Texas established a professional nurse-training course in 1918. There are already nine graduates; tenth-grade graduation is required for entrance; and the course is three years in length.

Since all of these institutions are chiefly of secondary vocational character and afford very little instruction of collegiate grade, their contribution to a higher standard of professional nurse training for negroes is as yet unimportant. Since in all cases small student infirmaries of limited variety and capacity offer the hospital practice for these courses, the grade of practical instruction can not be high.

Chapter V

FOODS AND NUTRITION

By Flora Rose

Professor of Home Economics, New York State College of Agriculture, Cornell University

---

The changes in education in foods and nutrition which have taken place since 1910 may be summarized under two general headings: Changes in subject matter and changes in methods of teaching. In both these cases, however, the most important changes have consisted of a shifting of emphasis from the technical to the functional, or practical, phases. These changes are in line with the general movement in education in many subjects.

CHANGES IN SUBJECT MATTER

The most significant change in subject matter, so far as its relationship to education is concerned, is the change which has been made in point of view, or emphasis. Ten years ago most of the courses in foods and nutrition dealt with problems of food preparation, with a small amount of time allotted to the more technical phases of nutrition. This was true in colleges as well as in secondary and elementary schools. At the present time, the whole subject of education in foods and nutrition is centering around the application of knowledge of food preparation and principles of nutrition to the larger problem of feeding human beings.

At the beginning of this decade the subject of food preparation had reached an advanced stage of practical development. Simple principles had been formulated and put into practical operation. There was an abundance of printed matter on cooking in popular magazines, in well organized and standardized cook books, and in a few simple, comprehensible, if inadequate textbooks. A considerable part of foods work in teacher-training institutions consisted of courses in food preparation, and in these the practical phases of cooking were treated with only occasional attempts to develop the more technical, scientific aspects of cooking.

Then, with the suddenness with which events occur once in a generation or so, things began to happen. The biological method of studying food values came into prominence. The chemical labo-

ratory almost overnight was partitioned to make a place for cages of small animals. Foods which until then had been tested chiefly in test tube and beaker were hereafter to be tried out on the living animal. During the last decade the life histories of many generations of rats, guinea pigs, rabbits, and pigeons have yielded secrets which had been guessed but never before revealed. The changes in subject matter which this method of testing foods has introduced are no more important than the changes which have come in quieter periods of growth, but they are more dramatic in consequence.

Long before 1910 there had been accumulated the great body of technical fact which is the foundation of nutrition subject matter to-day. During the present period, however, the study of protein has shifted from what was largely a quantitative study to a qualitative study, with the knowledge that proteins vary greatly in their building, repairing, and maintaining values.

Ten years ago mineral matter was given second place in any discussion of human nutrition needs. At the present time, it is never discussed as mineral matter but in terms of its elements, calcium, phosphorus, iron, iodine, and the others. The relationship of insufficient amounts of one or more of these elements to faulty nutrition is becoming a matter of common knowledge.

The whole subject of the vitamins has been opened up and three of these substances in foods or properties of foods have been widely discussed and definitely named. A possible fourth vitamin has recently been considered. The vitamin development represents the most spectacular occurrence in nutrition in the decade.

Although the energy value of food and human energy needs had been well declared before this decade, there have been important additions to our knowledge of specific conditions affecting energy needs. This has been particularly true in the case of energy metabolism in disease and during the growing period.

These changes have caused a shifting of emphasis not only from food preparation to food selection but also within the subject of food selection itself. Courses in nutrition are now beginning to deal with the practical phases of feeding rather than the technical phases of food composition. Diets are discussed less frequently from the standpoint of the foodstuffs that they contain, such as protein, carbohydrate, and fat, and more frequently from the standpoint of the foods themselves, such as milk, cereals, roots and leaves of vegetables.

The development of colloidal and physical chemistry, it is true, has stimulated interest in scientific problems of food preparation. The beginning is being made in determining the effects of various cooking processes upon foods.

The buying and cooking of food no longer constitutes the bulk of information which is both available and usable. Equally ready at hand is the whole story of how these foods will affect the human being. The change is from the technical to the functional. It is necessary, however, to keep clearly in mind the fact that this change depended upon the development of the subject matter to a point where it was useful.

Contributions to the body of subject matter are now being made by research within departments of home economics themselves, as well as in the laboratories of other departments.

CHANGES IN METHODS OF TEACHING FOODS AND NUTRITION

Methods of education in foods and nutrition have followed the trend of modern educational procedure; that is, a shifting from the old lecture method of teaching to the modern problem-project method. The change in emphasis here again has been from the technical to the practical. It has become widely apparent that the teacher is obligated not only to give facts but to make the facts function, not only to give the principles of feeding but to follow them up with the right practices. The school lunch, the nutrition class or clinic, mid-morning feeding, the baby in the practice house, and the practice house itself are all illustrations of this point.

CONCLUSION

The changes in both content and method of courses in foods and nutrition in schools and colleges during the last decade have been directed toward giving students not only a knowledge of subject matter but an enthusiasm for establishing food practices which will produce healthy human beings.

Chapter VI

HOUSING AND DESIGN

By HELEN B. YOUNG

Formerly Professor of Home Economics, New York State College of Agriculture, Cornell University

Of the three basic subjects with which home-economics education is concerned, food, clothing, and shelter, that of shelter has developed last and perhaps less well than either of the other two. The earliest courses were concerned with: (*a*) Evolution of the house from early ages down to the present time, (*b*) the cost of shelter in relation to other necessities of life, (*c*) sanitation of dwellings in relation to health, (*d*) management of the home as affected by the convenience of the house.

The foregoing courses based their study on houses as they actually existed, with whatever faults those dwellings happened to possess. The idea of the house as a controllable arrangement of space and fittings is a matter of very recent study. Prior to 1910 only four schools report college courses in house planning and furnishing, the oldest course among them being one in domestic architecture, given continuously for 26 years by the architectural engineering department of the Montana College of Agriculture and Mechanics Arts, as a required part of home-economics study. Since 1910 the average period over which the work in question has been offered is seven years.

The development of subject matter for courses of study is more difficult to trace. So little can be gathered of the progress story of other schools that one is obliged to fall back upon personal experience.

The point of view and the main lines of thought which, from 1910 to 1920, led up to the present courses may be indicated as follows: Wanted: A housing standard. Wanted: A study of home surroundings that shall center about a theoretically sound house. Wanted: A house conception that shall embody the home-economics idea.

Following these proposals, let it be assumed that the home-economics idea aims to reduce daily living to its simplest, most wholesome, and most beautiful terms. Assume that it aims to conserve human values and to provide for a margin of leisure; that it

is concerned with the well-being of the whole man, body, mind, and spirit; and that it claims for every family the right to a well-conditioned home. Extend this point of view to include the life of the community and its problems. Assume a collective intelligence applied to the common good: humanized conditions in every place where people live, work, play, or do business together; and civic housekeeping that shall make for a well-conditioned town. Home economics stands for humanized and spiritualized conditions for all.

A STANDARD HOME

A home can be only so well conditioned as the provisions of the house permit. The management of the home must be adjusted to the structure that shelters it. The arrangement, construction, design, equipment, and furnishing of the house fix the conditions under which the occupants must live.

A house must accordingly be planned for economy of housekeeping effort; for economy of cost to build, to heat, and to maintain; for convenience of parts; for adequate light and air; and for pleasant and furnishable spaces.

It should be designed with pleasing proportions inside and out. It should be adjusted in shape and outlook to the site on which it is to stand. It should be congenial in color with its surroundings, and the whole property should be pervaded with that sense of privacy which is the true attribute of home.

A house should be built of durable materials, well assembled in natural ways, and equipped with good heating, lighting, and plumbing systems.

The interior of the house should be provisioned for comfort and use, well lighted by day and by night, harmonious in color and personal in taste, individualized by the choice and arrangement of furnishings, and orderly, simple, and beautiful in its effects.

Such a dwelling might be called an up-to-standard house, since it embodies in structural terms the desired standard of living.

All residents of every community should be thus suitably housed. They should have equal chances for health, comfort, and growth, and should be spared the waste and ignominy of indecent habitation.

As by-products of the regular courses, two planning problems present themselves as fit subjects for research. The first of these is the farm house; for of all types of dwelling places that need improved standards, the farm house is the outstanding example. Cut off as it is from such public utilities as water mains, sewage systems, and electric light and gas lines, and serving as it must, so many uses, the farm house constitutes the most difficult of housing problems and the one most in need of professional help. Lacking this, the

farm dwelling has proved itself to be the most inconvenient of homes and the most enslaving to womankind. A few noteworthy examples of houses planned expressly for farm conditions exist in the Middle West, but New England and the eastern United States are burdened with old farm dwellings that retard the day of fresh experiment. Yet even here the demand for good, new tenant houses keeps the attention fixed on the need of housing standards for farm dwellings. A thorough examination of farm home requirements and conditions; an organization of its needs; and a few principles for interrelating the parts of the house, terminating with two or three sound designs for small farm houses, are factors that constitute a very real problem in research which so far at least has been inconclusively studied.

The idea of a standard kitchen is the other problem that has needed investigation. The home kitchen, being the very core of the work, is the place where economy of time and labor would be most felt. The repetition of identical operations and the use of essentially the same pieces of equipment in all home kitchens suggest to the mind a uniform simplification or standardization of arrangement. After much deliberation, study, and experiment, however, it seems that, for many reasons, the most that can be proposed is a set of principles for kitchen planning, based on a proper interrelationship of parts. These principles cover minimum and maximum floor area, amount of glass area, number and location of doorways, and arrangement of equipment based on a sequence of operation. This study should terminate with several good kitchen plans, in which different fuels and different home conditions have been assumed.

The curriculum that has developed from the subject matter just reviewed varies considerably in the different schools. The returns show a great diversity in the names of courses given, varying from domestic architecture, residence architecture, the house, house architecture, household architecture, home architecture, interior decoration, home decoration, house decoration, and home or house furnishing, on the one hand, to house management, home management, sanitation, and mechanics of the household, on the other hand, with variants or combinations of two.

INTERIOR DECORATION

The wide variety of course names indicates also considerable variation in content and in point of view. While practically nothing can be told from the names or brief descriptions of the courses, still, in so far as anything can be told, it appears that each of the reporting schools offers one or more courses that center around the house, and cover in some manner, the arrangement, decoration, and furnishing of the home. The records show that 10 schools devote one course

to this work, for which three to six hours' credit is given; 10 schools devote two courses to this work, for which five to nine hours' credit is given. These courses are without exception required of students majoring in home economics. Eight schools report additional courses in drawing, design, applied art, history of art, and history of architecture. Most of these courses are elective, though a few are required chiefly as prerequisites. Three schools report courses in housing or housing problems, one of which is a graduate seminary. One school reports a course in institutional furnishing.

In general, the emphasis throughout this group of subjects is on the decoration, furnishing, and equipping of the home rather than on the planning of the house. Where planning the house is the avowed theme, the work bears heavily on the practical side, stressing the sanitation, construction, management, and mechanism of the house rather than its design. Two schools mentioned landscape gardening as a supplement of the work in house planning.

The courses in interior decoration and furnishing seem fairly uniform in content. In general, they aim to apply the principles of color and design to the selection and arrangement of home furnishing, seeking practical application in practice houses wherever possible, or deploring the lack of opportunity where actual problems are missing. In only half a dozen cases do these courses follow prerequisites in drawing or elementary design, so that principle must be studied and applied in the same course.

With two exceptions, namely, the Agricultural College of Utah, where design is conducted by two English-trained craftsmen, and the University of Delaware, where home economics courses in art are given by a separately organized art department, courses offered in interior decoration or in house planning and furnishing make no vocational claim, but are intended for personal cultivation and personal home use only.

The courses previously discussed, while having a profound value, if inspiringly taught, can hardly lay claim to important results of a reportable nature. Cultural study is always important, enlarging the mind, setting free the spirit, and, in the end, rendering the individual more valuable to any work in which he or she may be engaged. Add to this the joy that is felt in any creative pursuit, and one realizes that under cover of such unassuming names as the planning and furnishing of the home the student is offered one of the most delightful and revealing experiences that education can supply.

Outwardly these courses will eventually react toward the betterment of taste; toward the development of simpler, more inspiring surroundings; toward improved standards of housing; and an enlarged social viewpoint in relation to the use of private and public property.

Judging from the results of the questionnaire which was distributed, the future of home economics courses in house design and furnishing lies more in the direction of improving the quality of the courses already given than in increasing the quantity or content of them. As home economics schedules are at present arranged, there is little chance to expand the subjects in question and little desire to do so. The schools claim that it is very difficult to meet State, Federal, and general college requirements, and, at the same time, to offer a special course of study that shall lead to a B. S. in home economics degree. Apparently all house planning and furnishing work has been an uphill matter, the chief difficulties of which seem to be: Lack of time in the course of study, inability to secure the proper instructors, lack of foundation courses in drawing and art, and lack of actual practice or observation opportunities. Only three schools report this work hampered by lack of funds or of equipment.

To understand the full significance of what is implied in the expression "improving the quality of the courses already given," one must again refer to the data obtained through the questionnaire.

The returns show that out of 61 courses reported 56 are of such a nature as to require of the instructor some form of training in art and experience in some form of design. Yet out of a reported instructing staff of 54 members conducting the above courses only 7 were fitted with architectural training, 13 had studied in schools of fine or applied arts, and 34 reported degrees of B. A., B. S., M. A., Ph. B., and Ph. D., with B. S. greatly in the lead.

What, one asks, can be the value of art courses conducted from a science background? What, indeed, could be the value of science courses conducted from a background of art? This is a serious situation. The criticism can not, however, be said to lie with the individual teacher, who no doubt in every case endeavors to render good instruction, but lies rather with the acadamic standards that permit such a condition to exist. Optimistic as one would like to be about the future, one can not but conclude from these figures that the courses in home economics which relate to the design and furnishing of the house are not, at present, in many cases, up to the standard required of courses in science, history, or economics, if indeed they are of college grade at all. To improve quality of these courses is undoubtedly the immediate problem, depending for its solution upon finding a source of supply of adequately fitted teachers or, to put it differently, of finding able designers with an educational bias who are willing to teach.

Another factor in the situation is its vocational aspect. While presumably home-economics education is designed to develop intelligent home makers, in reality it must also equip a student with a

training that she may sell. Hence the schedule has been so arranged that she may specialize in foods or major in clothing and, upon graduation, find herself able to earn a living thereby. Not so with a study of the house and its furnishings. These courses as they now exist, though technical in content, have intentionally only a general educational aim and do not purport to lead to a vocational end. As a result they have not received the same sympathy and support as other subjects, but have been allowed to take a secondary place in the program, an explanation that might readily account for the general backwardness of all the design work attached to the home-economics schedule.

If in future it is proposed to offer professional instruction in interior decoration or other forms of design, it will be necessary to build up a department of art coordinate with science, but quite independent of it, and allow the student full liberty to elect four years of work therein. Any vocational training in art will prove wholly ineffective if given as an adjunct to other work. It must be allowed to absorb the entire time and attention of the student for the full four years.

If a department of architecture is at hand, the professional course in interior decoration rightly belongs there, for an architectural school is, by the personnel of its faculty, its equipment, and the atmosphere of its work, best fitted to undertake it.

Whether courses pertaining to house design and home furnishing are in future merely improved in quality or are expanded in content, they must at least be freed from the smothering influence of science that now surrounds them and must be permitted to create their own atmosphere and establish their own conditions, for there is always this about any form of art—it must be the best or nothing. No half-way measure will do. If it does not inspire, if perfection is not the blood and bone of its intention and belief, then does it lack its own essence.

Chapter VII

TEXTILES AND CLOTHING

By Iva L. Brandt

Head of Household Art, Iowa State College of Agriculture and Mechanic Arts

Some phase of textile and clothing work is offered in all the land-grant colleges. The Kansas State Agricultural College seems to have been the first to introduce it. A report from this institution states:

> Work in sewing was offered in this college in the form of what was known as "industrial," previous to 1878. In this old industrial system the students had definite instructions in a laboratory exercise on the problem in hand, but there was no theoretical work. The students took their materials to class and were taught how to sew both by hand and by machine.

Iowa State College was the next to offer clothing work. In the catalogue for 1885 a course in sewing and millinery was listed. Prior to this the work in domestic economy, as it was then called, consisted of lectures pertaining to foods with laboratory practice in the kitchen of the president's home, Mrs. Welsh, the president's wife, being the instructor.

The majority of the land-grant colleges have been giving clothing work from 10 to 15 years. In 14 of them opportunity is now given to undergraduates to major in textiles and clothing.

There has been a decided uniformity in the development of subject matter for the courses and also the curricula in textiles and clothing in the various schools. Ten to twelve years ago the main emphasis in clothing work was placed on the technique of garment construction. Courses in clothing were listed as follows: Sewing or garment making; elementary and advanced dressmaking; fine hand sewing; fine needlework; embroidery; drafting; tailoring, etc.

There has been a gradual change. Clothing work is no longer centered on processes of construction. More and more attention has been given to clothing selection, emphasizing design, color, texture, and appropriateness, in their relation to the individual, the type of garment, and the use to which the garment is to be put. The work is being stressed from the consumer's standpoint, training judgment in addition to training for skill in construction. Technique is not being slighted, but attempts have been made to use short cuts, to

make use of labor-saving devices for clothing work now on the market, and letting machine work take the place of much of the tedious hand work. These standards of textiles and design are applied to the selection of ready-to-wear garments as well as to garments made in the laboratory. Emphasis is placed on keeping of accounts and planning clothing budget as necessary for wise and intelligent buying.

The aim of the textile and clothing departments now is not simply to teach finer technique and a greater appreciation of design in the costume, not only to train the student to plan and construct for herself and others attractive, becoming, economical, and hygienic garments, but also to make her conscious of her great responsibility as the chief spender of the family income, the buyer of clothing and household textiles; to call her attention to the need of preparation for wise and intelligent expenditure. The establishment of a better spirit of cooperation between consumer and dealer is also an important desideratum.

The names of the courses found in the catalogues at the present time indicate this change. The following are examples: Clothing—elementary and advanced, applied dress design, costume design, textile design, children's clothing, textile buying, textile economics, manufacture and selection of clothing, history of costume in its sociological aspect, etc.

In the development of the textile and clothing curriculum there is a marked tendency to correlate the work more closely with art courses, textile chemistry, economics, sociology, and psychology. Many of the schools have either dropped from their curriculum or are offering as electives only some of the courses, such as drafting, fine needlework, embroidery, etc. The commercial phase is being introduced in a number of colleges. Several schools report the management of clothing shops as a part of the work of the department.

Reports from the different colleges of the rapid growth and the new interest aroused in textile and clothing work are most gratifying. Colleges that are offering opportunity to undergraduates for majoring in either clothing or foods report a growing popularity for the clothing major. Several institutions reported a larger number majoring in clothing than in foods. One school reported twice as many in clothing as in foods. A few years ago the report would have been quite different, as comparatively few were majoring in textiles and clothing at that time.

Other important results from the development of clothing work that have been noted in different schools are as follows:

Education of the consumer is felt by the merchants.

Clothing work has created better standards of dress, a demand for better materials, better designs, better style and finish in ready-to-wear garments.

Choice of house furnishing has improved.

The inclination of women to-day to plan budgets for the spending of the family and personal income.

The expression of individuality in dress rather than the blind following of fashion.

Arousing interest in the possibilities of textile and costume designing in this country.

The textile and clothing work is closely related to the present economic situation in the United States. All persons interested in this work have done what they could to conserve materials and resources, to create appreciation of the high quality of the textile output of this country, and to lend their influence in getting textile legislation passed. Textile and clothing work has also awakened women to their social obligation toward women and children textile workers, and has given them sympathetic interest in the conditions under which they work, resulting in the active interest women have taken in laws and legislation for the betterment of these conditions. The textile and clothing departments are doing what they can to further the work of the committee on standardization of textile fabrics, appointed by the Home Economics Association of America several years ago. The chairman of three out of the six important subcommittees are from the clothing faculty of our State colleges, and much of the investigation in connection with the study of purchasing habits made in 1920 was done by them.

Future development of clothing work in the colleges has been suggested along the following lines: Application of hygienic, economic, and aesthetic principles to the selection of clothing for the family; development in designing of clothing appropriate to various types, using historic inspiration; presenting the work so that it will more and more function in the everyday life of the students, and at the same time keep the subject matter in the same rank with other college work. Many schools have selected research work as the next step in their plans for the future. Nine schools state that graduate work has already been introduced. Some of the research problems that have been worked on were: Effect of sun on colored materials, cotton and wool; effect of commercial washing powders and soaps on cotton and woolens as to shrinkage and fading; effect of chemicals for setting of color in gingham; survey of textile and clothing courses; evolution of ornament in lace design; artificial silk—its introduction and development, present place among textile fibers, and probable future; plays for schools and colleges, with complete bibliographies for historical settings and costumes—fully illustrated with original designs in color and black and white—with patterns, directions, and drawings to scale for scenery, properties, etc.; comparative study of present-day commercial patterns, with patterns

drafted to measure, etc. The number of students interested in graduate work in textiles and clothing is rapidly increasing.

Graduates who have majored in this work are filling many interesting positions. Besides entering the teaching profession, doing extension and settlement work, or becoming homemakers, many are going into commercial enterprises. The following are the types of commercial positions they are filling: Designers of clothing, dressmakers; modistes; heads of clothing departments, and buyers for clothing departments in wholesale and retail concerns; museum curator of patterns, textiles, and laces; and clothing consultant in department stores and specialty shops.

A report of the textile and clothing work in land-grant colleges would not be complete without including the activities carried on by the extension departments of these institutions. Tennessee reports clothing work as having been introduced in 1910. Practically all the other colleges date back to 1913, 1914, and 1918. The Kansas State Agricultural College reports:

> Previous to 1910 a number of extension schools had been held featuring clothing construction. These usually lasted a period of from one to two weeks in a community, and corresponded to the laboratory courses offered under the head of short courses at the agricultural college. They were extremely popular.

The following is from the University of Illinois:

> The work in clothing and textiles previous to 1910 was done by the resident faculty. This work was in the nature of lectures and demonstrations given at farmers' institutes, women's clubs, etc. In addition to this field of work, a short course was held for two weeks each year. At this time, the women from different parts of the State came for instruction in dress construction, testing of materials, and millinery.

The report from Iowa State College is as follows:

> Previous to 1910, the clothing work in the extension service was presented through demonstrations and was taken care of by general home economics women. Since that time, we have employed well-trained clothing specialists who are assisted by women who have majored in clothing.

Until 1918 or 1919 most States reported all their home economics specialists in Smith-Lever work as a single unit; that is, all the workers were listed simply under "home economics." As the result of an effort to differentiate the lines of work in home economics as has been done in agriculture, States were urged to choose a separate Smith-Lever project for each distinct line of home economics, for which they employed one or more full-time specialists, and since 1921 this custom has become universal.

The war demand for greater economy in the use of textiles and clothing gave a great impetus to the clothing project. Conservation of wool and other materials was urged as a war measure. Then followed the thrift movement, and the high prices and poor quality of

textiles and ready-to-wear garments carried the clothing project to still greater popularity. During this period, there was a rapid development in the system of home demonstration agents and girls' club work. With this came an increased demand for technical advice and assistance to these agents, and specialists were added to aid the home demonstration agents and to organize the work in counties that had no agents. At the present time, the clothing project including millinery employs 39 specialists, which is the largest number of extension specialists of any, the next largest being nutrition with 38.

The great demand for clothing work, the rapid development of the clothing project, and the number of specialists that were called into the field resulted in a conference of all clothing specialists in Ames, Iowa, November, 1920, called by the States Relations Service. This was not only the first meeting of clothing specialists, but also the first conference for State extension specialists in any line.

The clothing work in practically every State that has become well organized is presented through carefully prepared projects given to local leaders. These leaders are selected because of their technical ability and their intelligence and ability to pass on what they have learned. Brief extracts from reports from some of the States are as follows:

Kansas.—Extension workers have been obliged to select certain definite topics from the mass of subject matter taught at colleges, which can be taught intensively and handed on through local leaders to the rank and file. In clothing this has meant giving instruction to groups in the making of a paper dress form, the altering of a commercial pattern, the ordinary sewing construction processes, and the part line and color play in the costume.

Illinois.—There has been a rapid increase in the demand for clothing and textiles in the last five years. During the conservation period stress was placed on remaking garments. As a result, the constructive side was dominant. Through this remodeling period it became evident that women as a whole knew the constructive processes, but needed training in the selection of material, appreciation and interpretation of design and choice of color, the proper use of the commercial pattern, etc. During the past few years the greatest stress has been laid on the selection of materials, design, color, etc., rather than on the construction side.

Iowa.—The following is the general plan of an Iowa county project:

Purpose: (1) To develop a greater community spirit; (2) to help the women of the county with their problems in clothing construction; (3) to show the women of the county how to use the farm bureau organization.

County goal: (1) To extend the clothing work as far as possible in every organized township and create as much enthusiasm as possible; (2) to create friendly rivalry among all organized townships.

Township goal: (1) To reach every school district with at least three phases of the clothing work; (2) to establish some phase of the work in at least 70 homes in each organized township.

Plan: (1) Local leaders secure accurate information through training schools in 5 months' clothing work, pass the information to the other women, and report records of work accomplished at each meeting. (2) Secure a list

names of all women who have had the clothing work and will be willing to into other townships to present the work. These women are local leaders.

Phases of the clothing work to be emphasized: (1) Homemade dress form; (2) use and alteration of commercial patterns; (3) making of foundation pattern; (4) making a simple dress; (5) finishings and trimmings (including decorative stitches); (6) renovation of hats.

Pennsylvania.—For several years the home economics extension service has been studying the clothing problems of the women in the State, trying to discover a way in which the greatest amount of help in solving this problem might be given, and making plans for working it out.

California.—The aim of the clothing work is to assist in improving the clothing standards in the agricultural area of the State in two respects: Simplified construction and efficient selections of material and design. There is a real need of this type of service for the rural women, who are making wide use of this opportunity for themselves and their families in more suitable wearing apparel, or purchasing it more wisely. As to the future of this work, it is as big as we are able to make it.

Idaho.—There has been a tremendous interest in clothing and millinery work. It is to be hoped that the work will lead to the better expenditure of money for clothes. Out of this endeavor there ought to come a standardization of textiles.

Washington.—For the future we hope to bring a closer correlation between clothing work with adults and clothing work with girls; to develop a family plan of expenditure; better standards of dress; greater manipulative skill; and more efficient use of time.

The Government report for clothing work accomplished in 1920 is as follows: 400,000 new garments made, 25,000 remodeled, 9,000 dress forms made, 7,500 hats made, and 7,000 hats remodeled. Over 250,000 articles of clothing were made, with a saving of $350,000.

The chief results of this work, as given by many State leaders, are development of leadership and community spirit and wider knowledge of better standards of dress.

Chapter VIII

HOUSEHOLD ADMINISTRATION

By ALMA GRACE JOHNSON

Professor of Household Administration, Oregon Agricultural College

Catherine Beecher, in her Treatise on Domestic Economy, made a strong plea for the better administration of the home, in seeking a remedy for the "deplorable sufferings of multitudes of young wives and mothers from the combined influence of poor health, poor domestics, and a defective education." She argued:

> When young ladies are taught the construction of their own bodies and all the causes in domestic life which tend to weaken the constitution; when they are taught rightly to appreciate and learn the most convenient and economical modes of performing all family duties, and of employing time and money; and when they perceive the true estimate accorded to these things by teachers and friends, the grand cause of this evil will be removed. Women will be trained to secure, as of first importance, a strong and healthy constitution, and all those rules of thrift and economy that will make domestic duty easy and pleasant.

From these earliest times we have had courses which were not strictly food or clothing courses, but which were intended to help in the better administration and management of the home. We find Iowa State College giving lectures on housekeeping in 1872, and Oregon Agricultural College in 1889. This chapter will show the development of some of the home economics courses that do not concern themselves with food, shelter, or clothing alone, but rather with those activities which have to do with the administration of the home and family life from the economic, sociological, and scientific standpoints.

Prior to 1910 home economics was taught in 27 land-grant colleges, and the following courses bearing on some phase of administration were offered:

Colorado.—Emergencies and home nursing, sanitation and chemistry of cleaning, laundry, household economy, accounts, marketing.

Connecticut.—Household management, laundry, emergencies.

Idaho.—Domestic economy, house sanitation, emergencies, and home nursing.

Illinois.—Home architecture and sanitation, household management, economics of family group.

Indiana.—Household sanitation and management, hygiene, and care of the sick.

Iowa.—Household management, household accounts.
Kansas.—Household management, home nursing.
Maine.—Household economics, laundry work, marketing, serving, accounts, practical housework, home nursing.
Michigan.—General housekeeping, laundry, household management, home nursing.
Minnesota.—Evolution and administration of the home.
Missouri.—House sanitation, home administration.
Montana.—Sanitation, home nursing.
Nebraska.—Home economics, care of the house.
New Mexico.—Laundry, home nursing, sanitation, and management.
New York.—The home, sanitation, household management.
North Dakota.—Marketing and domestic accounts.
Ohio.—Household management, sanitation, home nursing.
Oregon.—Home economics and house inspection, laundry.
Pennsylvania.—Housekeeping problems, household management.
Rhode Island.—House construction, sanitation and cost, household hygiene, child hygiene, a study of the family, household administration.
South Dakota.—Household sanitation, home nursing, household economy.
Tennessee.—Home sanitation.
Utah.—Home sanitation, home construction, and household management, home care of the sick, laundry, home construction and sanitation, home nursing, household economics.
West Virginia.—Home nursing.
Wisconsin.—Sanitation, household management.
Wyoming.—Household economics.
Washington.—Kitchen management, laundry work, home management.

In these courses a strong tendency was apparent to give training in the administration of the home along the line of sanitation, home care of the sick, laundry, cleaning, finances, and management.

Since 1910 there has been such rapid development in the field of home economics in general and household administration in particular that the year 1922–23 finds 10 land-grant colleges having separate departments of household administration, household management, or household economics, and 39 institutions teaching some courses in household administration.

While there is great variation in titles of courses offered, it is evident on examination of the courses that all of our household administration teaching might logically fall under the following general headings:

1. *The family.*—History, functions, marriage rites and laws, birth rates; influence of illness or death of parents, of low wages; unemployment and bad housing, employment of mothers, family neglect, desertion and divorce, service problem.

2. *The house.*—Its location, construction, arrangement, finishing, furnishings, and equipment. Proper care and use of house and its equipment and furnishings including labor-saving devices.

3. *Sanitation.*—The health of the family and community as influenced by location, ventilation, heating, lighting, water supply, sewage, and waste disposal; control of housing conditions; vital statistics; control of communicable and noncommunicable diseases; public health administration and the home.

4. *Home nursing.*—Problems having to do with the home care of the sick, first aid, etc.

5. *Marketing.*—There are at least a half dozen colleges offering definite courses in the problems connected with the purchase of household commodities. In most of the other institutions this work is given in other courses.

6. *Child care.*—Responsibility of parenthood, prenatal care, eugenics, development of child from conception through infancy, childhood, adolescence; habit formation; child feeding and welfare.

7. *Household management or administration.*—A study of efficiency applied to the methods of housekeeping; standards of living and family expenditures; budgets and accounts; the time necessary for housework and the use of leisure time.

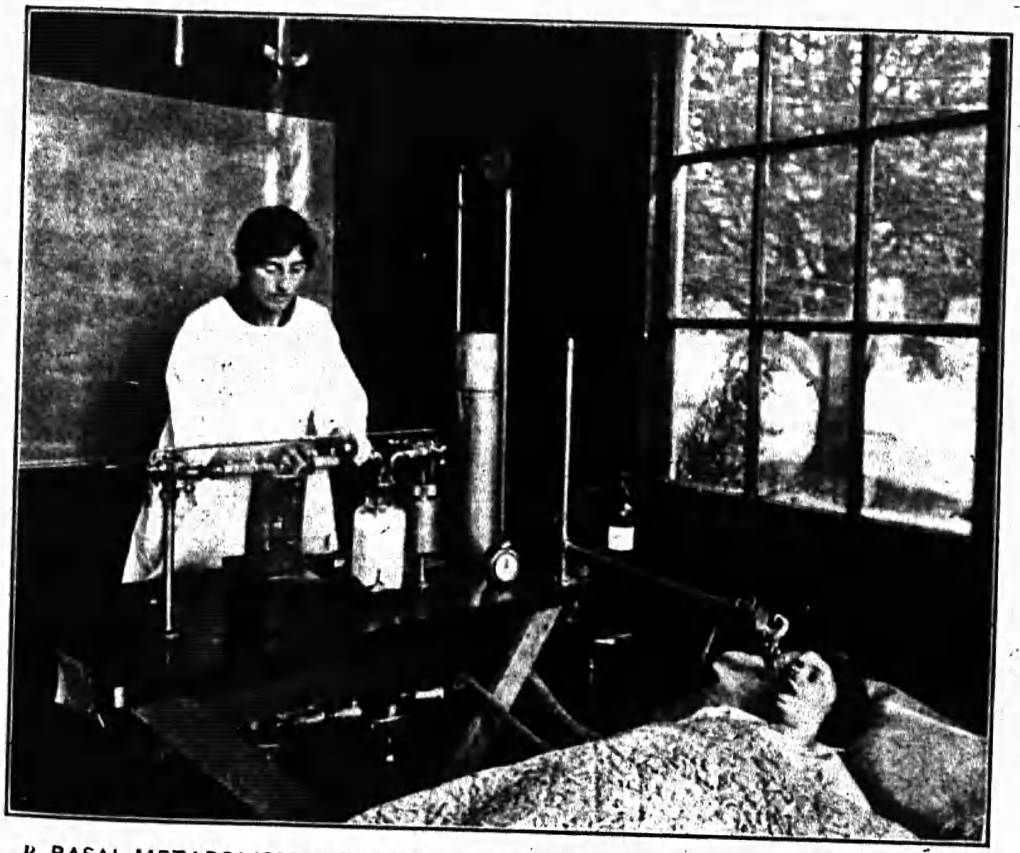
8. *The practice or home management house.*—A cottage where students live and perform the usual household tasks, making application of all previous training; planning meals; marketing; cooking; serving; caring for rooms; laundry; household accounts and budget; care of children, etc.

Where there are not regular household administration departments offering courses falling into the divisions just described, some such courses are offered in either the household science or household arts departments. California serves her students in a rather unusual way, offering "The budget" and "Standards of living" in the department of economics.

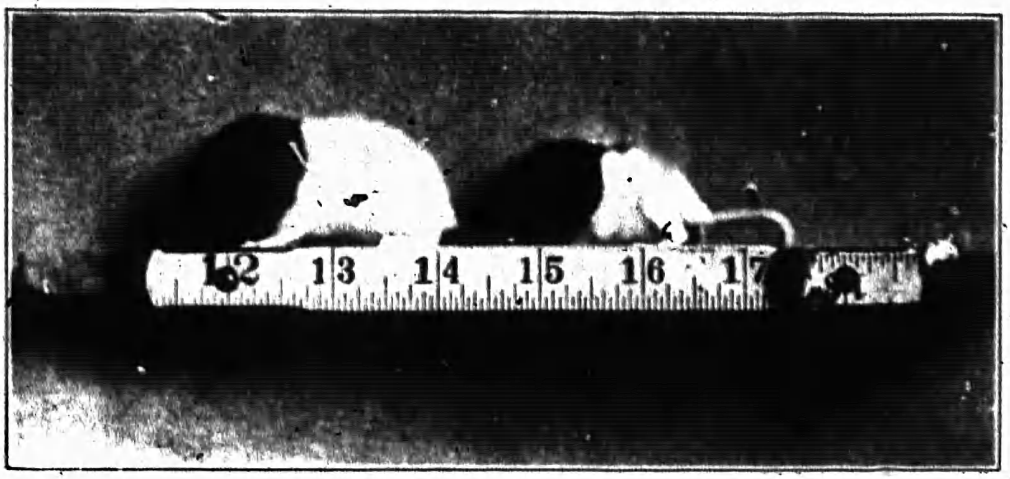
Reports seem to indicate that there has been greater development in the field of household administration in the last 10 years than in any other phase of home economics work, with an effort to impart through these courses the best standards of economic, social, and administrative efficiency.

The most important development of subject matter and course of study seems to have been along the lines of child care and actual management of the household. There has also been great development, however, in the underlying or background work of all household administration subjects. There was a strong tendency in the beginning to fit home economics graduates to teach in the field of their chosen profession. While this still is done in practically all of our institutions, we note an effort on the part of all to prepare very definitely for the task of home making. More attention is being given to underlying science, art and economics, such courses as art, chem-

A. EXPERIMENTAL ANIMAL LABORATORY, DEPARTMENT OF HOUSEHOLD SCIENCE



B. BASAL METABOLISM LABORATORY, DEPARTMENT OF HOUSEHOLD SCIENCE
UNIVERSITY OF CALIFORNIA



A. RESULT OF FOOD EXPERIMENT ON MICE. DEPARTMENT OF HOME ECONOMICS, UNIVERSITY OF WISCONSIN

B. CAMPBELL HALL, HOME ECONOMICS BUILDING, OHIO STATE UNIVERSITY

A. HOME ECONOMICS BUILDING.

B. PRACTICE COTTAGE, HOME ECONOMICS DEPARTMENT
STATE COLLEGE OF WASHINGTON

A. HOME MANAGEMENT HOUSE

B. DINING ROOM, HOME MANAGEMENT HOUSE
OREGON AGRICULTURAL COLLEGE

istry, bacteriology, physics, physiology, economics being made prerequisites to household administration courses. Bacteriology and physics usually precede home nursing; chemistry, physics, and economics are taken before housewifery or care of the house; economics frequently must precede budgeting and accounting; physiology and psychology often precede child care.

While there has not been a great change in the titles of courses, we find a strengthening not only in background work just mentioned, but also a broadening of the content of courses accompanied by an increase in the credit given. It has been the history of most of the household administration courses to find the work first covered in a food or clothing course, then given as a unit course, possibly elective, carrying one credit, but soon developing into a three or more credit course required for at least certain groups of home economics students. The subject matter has in every case been developed through a study of the needs of the homes of to-day. The study of related work in sociology and economics has done much to develop these courses.

Research work has played no small part in the development of household administration courses. Nebraska reports research carried out through practical problems in methods of work and budget making. Wisconsin offers opportunity for research in special problems of household administration. Purdue has been allowed experiment-station funds for research in home economics, and will have a research laboratory in the new building. It has appointed a woman to carry on this work independently of any teaching or extension work. Missouri has done some interesting research work along household-management lines, with theses on the following subjects: "Wage for household tasks," "The wage for home sewing," and "What is the fair length of a day for housework?" Kansas reports more interest in household administration subjects for graduate study than in any other line of home economics. Many other States give opportunity for research.

Although it is impossible to trace the definite development of the curriculum in household administration subjects or even to summarize, because there is too much variation, it is possible to note the general tendency to give balance to the home economics curriculum by requiring not only food and clothing as well as basic science and art, but also some work in the various phases of household administration. It is rather unusual to find much of this work open to freshmen, evidently due to the fact that we must train in the field of activities to administer before taking up specific administration courses, and to the further fact that much management work should be taught in all home economics courses. Practically all the land-grant

colleges require one or more household administration courses for a degree in home economics.

Utah is doing a unique thing in offering personal accounts, a course open to all college women, carrying one credit each quarter and running through the year.

The practice house or home management house is a most important recent development. Such houses are now found in 30 States, most of them having developed since 1914. This work is usually open to juniors and seniors who occupy the house in groups, varying from four to eight, who live in the house and carry on a definite home management problem for a period of from 1 to 12 weeks. The majority of the groups consist of six and eight and the usual length of residence is one-half of a term or quarter. A very recent addition to this course was started in the State of Minnesota, when actual child care was made a part of the work in 1918. Other States to follow the example are Oregon, Nebraska, Oklahoma, Arizona, Maine, Utah, and New York.

Some schools include courses in institutional management, in the department of household administration, but no special study has been made of that work.

The young women who are under training in land-grant colleges will be more efficient users of household materials and devices. They will be more efficient users of time and effort, knowing that to waste either is to waste life itself. This alone will do much to conserve the woman power of the Nation. They will be more efficient consumers because backed by technical knowledge and experience in purchasing under supervision. They will also be able to choose more wisely, and, therefore, increase the demand for articles which are serviceable and most useful. Dealers, manufacturers, and purchasers are seeking the advice of household administration departments on questions of labor-saving devices. Young women are going into their own homes and administering them in such a way that they have more leisure time; i. e., "time in which to do something useful," and they have higher standards for the use of that time. They have greater ease and efficiency in routine work; better kitchen administration is practiced; saner standards of living are adopted; while social ease and grace are becoming more common. Education of the consumer is felt by the merchant. Women are giving more time to civic housekeeping. We see not only a demand for better materials but also better design, and better finish in household furnishings. The budget work is rapidly leading to better apportionment of income, to saner standards of living, to emphasis upon the essentials of successful family life, and to a general stimulation of thrift.

The practice houses are serving as testing places for the managerial ability of our young women; they give us a splendid check on all work previously given. The fact that students can find their own strength and weakness, and can apply what has been taught, under a comparatively normal household situation, is of great value to them. This course is also going to result in better home-economics teaching in our public schools; for the young women are gaining a better understanding of the content of a well-rounded course of study in home economics, instead of placing all of the emphasis on clothing, foods, or house planning.

Practice house and household management courses, in short, bring to focus all home-economics work and help students to go into life with the underlying principles of successful and practical family life. They are thus greater civic assets. The schools introducing actual child care into their practice house training are so few, and the training has been given for such a short period of time, that it is difficult to give definite results. Among the schools which have undertaken it, however, a universal feeling exists that it is one of the most worth-while types of training ever given. It gives such expert care to the child that in every case he has been better fitted to meet his life problems than before (the improvement in physical condition is always most marked where there has been need of building up); he has shown good, wholesome mental development with no overstimulation; he is never spoiled; the home atmosphere is greatly improved; and the students receive experience in child training under expert supervision which will induce them to use much greater wisdom and prevent many unfortunate experiences when they become mothers.

The future of household administration work is very promising—

1. Through the courses we are going to check up on the various lines of training and determine where we must take from or add to the curricula, in order to produce the best home maker and citizen.

2. There is great demand for research in the various phases of household administration and great opportunity for development. This may be carried on in the home in a study of operation, finances, etc., and also in the factory, where household materials and devices are produced. Many manufacturers are welcoming research.

3. Household administration teaching will do much in the future through our public schools, home demonstration, and club work.

4. Household administration departments have a big field of future service through working out some way of training young women how to teach child care and child training to the students who come to college or take home-economics work in high schools. We are doing little in the real business of training for parenthood. We need to broaden and deepen our work so that we can cooperate

with other departments, and send out young women trained in psychology, child study, nutrition, economics, and sociology, and experienced in the actual handling of children. They will thus not only be better home-economics teachers, if they stay in professional life, but better mothers, home makers, and leaders in their communities.

5. The economic condition of any country is greatly affected by the economic standards of its homes. More vital and practical courses in budgeting and keeping accounts will evolve in the future as we get away from vague theories and teach the subject with real economics as a foundation, and apply our work to conditions as they actually exist.

6. The value of the practice house or home management house has been so thoroughly demonstrated that they will increase in number and take over more of our home economics teaching, because they more closely approach the home conditions than do the laboratories.

Chapter IX

INSTITUTIONAL MANAGEMENT

By LOUISE STANLEY

Chief, Bureau of Home Economics, United States Department of Agriculture

During the past 10 years the development of institutional management[1] in the land-grant colleges has been very rapid. An effort has been made to obtain information on the following points:

1. What State colleges were offering courses in institutional management and the year these were started?
2. What curricula were suggested for students majoring in this line of work?
3. The amount of practical work generally required and where this is obtained.
4. Suggested changes for improving the work.

In 1912 only two land-grant colleges, Illinois and Wisconsin, were offering courses in institutional management. In 1922, 17 institutions report such courses. These developed as follows: In 1914, Kansas, New York State College, and Oregon; 1917, Washington State; 1918, Purdue, Kentucky, and Georgia; 1919, Michigan, Minnesota, and New Hampshire; 1920, Iowa, Montana, Ohio, and Wyoming; 1921, Connecticut and Oklahoma. In addition, Arkansas offers some institutional work in the form of special problems. Several other colleges indicate the intention of developing the work very soon.

It is well to note the growth of institutional management in some of those institutions where it first started. In Wisconsin, where it began with a part-time instructor in 1912, who gave "the lecture and supervised work in institutional management" in the one cafeteria, the work has grown to seven courses, with four full-time instructors, using the central kitchen for the women's halls and the central cafeteria and several tea rooms for practice. At Washington State College, where institutional management had a small beginning in 1917, there were last year three full-time persons in charge of the work, with three courses, besides supervised practice in cafeteria and dining halls.

In seeking the reasons for the rapid development in this line of endeavor, two considerations present themselves. The first is the increasing demand of the young women for preparation for wage earning in other lines than teaching. The various phases of institutional management have proven to be very popular and are paying increasingly well. The second is the recognition on the part of the

[1] In this article it has been assumed that the dietitian as opposed to the institutional worker in the hospital has been covered by the food and nutrition section.

college administration of the desirability of placing the institutional problems of the the college under a trained person. Logically this person becomes a member of the home economics staff, and this is the first step in the development of a curriculum for training institutional workers.

An examination of present curricula shows that in general they are based upon the general home economics curriculum, the students electing a required amount of institutional courses during the junior and senior years. When special curricula for the training of institutional workers are developed these are usually recommended electives from other divisions. This material is summarized in Table 5.

TABLE 5.—*Courses now offered in home economics and household administration, and recommended electives*

State	Home economics courses	Courses recommended from other divisions
Connecticut	No list of courses submitted	
Georgia	Institutional cooking and management (3)	
Illinois	Lunchroom management (5)	
Indiana State college, Purdue.	Institutional administration (4). Institutional management (3).	
Iowa	Institutional foods (3). Institutional equipment (3). Institutional management (3). Institutional field work (3).	
Kansas[1]	Institutional management: I. (3) credits; 1 lecture; 2 laboratory periods. II. (4) 3 rec., 11 laboratory; problems in institutional administration (1–5). Graduate courses are offered for those especially prepared.	Business English; oral English; oral management; technical writing; institutional furnishing; institutional accounting; advanced English; applied psychology; labor problems.
Kentucky	Special problems in cafeteria management (6); institutional foods (3); institutional marketing (4); problems in institutional management (4).	
Michigan	Institutional management (5); institutional management practice (4); nutrition problems in hospitals (9).	
Minnesota[1]	Large quantity cookery and marketing (4); institutional experience (3); institutional management practice (3); institutional management (4).	Principles of marketing (3); principles of accounting (5).
Montana	Survey of institutional management (3); institutional cooking (4); institutional buying (2); institutional experience (4–7).	Not yet developed.
New Hampshire[1]	Large quantity cookery and marketing (3); institutional management experience (3); tea-room management (5); advanced institutional management (2); advanced institutional management practice.	Elementary typing (2); accounting (2).
New York[1]	Institutional practice (3); marketing and large-quantity cookery (4); institutional management (3); institutional accounts (4).	
Ohio	Institutional management (5); school lunch management (5).	
Oregon[1]	Large quantity cooking and marketing (3); institutional management experience (3); methods of demonstration (1); tea-room management; advanced instruction.	Elementary typing (4); int. to accounting (3); principles of accounting (3); accounting practice (3).
Tennessee	Only one course offered	
Washington[1]	Quantity cooking (3); all laboratory; institutional management (2); lecture, observation, and laboratory; home economics 42, continuation of above (4).	Principles of accounting; principles of marketing.
Wisconsin[1]	Organization and administration of institutions; large-quantity cooking; institutional dietaries and catering; institutional laundry management; tea room, restaurant, and hotel management; institutional equipment; institutional practice (graduate course).	Elements of economics; elements of accounting; theory and practice of accounting; cost accounting; social psychology; poverty and relief. Accounting 1a; accounting 1b; contracts and sales.
Wyoming[1]	Lunchroom management (3)	
	——do	
	——do	

[1] These institutions have developed definite curricula suggesting that these courses be elected during junior and senior years by home economics students desiring training for institutional management.

In looking over this material several important questions present themselves:

The first question has to do with the type of positions for which these courses are training. The answer to this can be secured best by an examination of Table 6, in which I have outlined the places where practical training is obtained. In general, they are furnishing experience for the administration of the food problem for large groups, either through cafeterias and tea rooms or the larger institutional groups. In a few cases, hospitals are suggested among those places where experience is obtained. This may be assumed to mean the general hospital food problem, though with special training in nutrition in hospitals, with experience in planning and handling special diets. The institutional manager may include in her training that of the hospital dietitian. We must all agree that the hospital dietitian, as that term is understood at the present time, needs training in institutional management.

In general, the State colleges, at present, are not training women for general dormitory supervision. This is probably due to the fact that in most institutions the importance of the proper handling of food is recognized first, and even in those that have turned their food problem over to a trained woman, the general housekeeping side is still handled by an untrained person, or a person trained on the job. The tendency is, however, toward placing the whole institutional problem under one person, with such assistants under her as are desirable. This will lead to more diversified training in institutional management.

The importance of such diversified training is recognized by the hotel keepers who discussed this problem at one of their national meetings. We find in the Hotel Monthly, of February, 1921, the following statement:

> The extraordinary growth of the hotel business in the past 20 years, the assurance of still further growth, and the wonderful opportunity the hotel field offers young people for lucrative occupation and life-time work are sufficient reasons for a college course of preparation.
>
> We investigated the existing machinery of a number of colleges and universities for such preparatory work, and found that several were already equipped, in particular as pertains to home economics, domestic science, and educating for institutional management. We have also observed that many of these schools would gladly extend the above-mentioned courses to include hotel work, as affording opportunity for a wider field of commercial occupation after graduation.

The foregoing is distinctly a challenge which the home economics departments of the State colleges have not yet met.

The second question which presents itself concerns the amount of practical experience required and the credit for the same. Some information in regard to this point will be found in Table 6.

TABLE 6.—*Practical experience required, etc.*

State	Amount	Where obtained
Connecticut	Not stated	Tea room, dormitories, and cafeteria.
Georgia		Cafeteria and women's residence hall.
Illinois		Home economics cafeteria.
Indiana (Purdue)	216 hours	Lunch room connected with home economics department.
Iowa		Small lunch room in department, and by encouraging students to obtain part-time and summer employment in commercial enterprises.
Kansas	163 hours in cafeteria	Home economics cafeteria.
Kentucky	Cooking 64 hours, serving 20 hours, culinary.	University cafeteria.
Minnesota	3 months internship instead of institutional practice.	College cafeteria and dining hall.
Montana	Courses are elective; so amount varies.	College dormitory and local hospital.
New Hampshire	1 term in hospital, cafeteria or other institution in Boston.	University commons, college infirmary, inst. in Boston, college catering.
New York		New economics cafeteria.
Ohio		Home economics cafeteria, with observation in commercial establishment.
Oklahoma		Home economics dining room; cafeteria under outside control.
Oregon		Women's halls and home economics tea room.
Tennessee		Women's halls.
Washington	270 hours quantity cooking and cafeteria management; 108 hours dormitory work.	Home economics cafeteria, four residence halls, three dining halls.
Wisconsin	Interne period before 16–20 hours for senior year.	Central kitchen, cafeteria, and tea rooms.
Wyoming		University commons.

Practical experience is desirable and necessary. It should be as varied as possible and as much as possible under the control of the department or well chosen, if good ideals are to be taught. It is becoming increasingly difficult for the girl to obtain all the experience she needs during her college course for credit and at the same time do the other work considered necessary. Two solutions are suggested—a minimum of practical work in connection with the credit courses, supplemented with either (1) noncredit practical experience or (2) an internship of a period of from four to six months, such as is now required of the hospital dietitian. Such an internship might be along one particular line in case the training is for a specific job, or in case the training is more general the experience can be obtained in several different types of positions. It is desirable that at least a part of this experience be had before the senior year.

Chapter X

TRAINING OF TEACHERS IN HOME ECONOMICS

(1) HOME ECONOMICS TEACHER TRAINING IN THE LAND-GRANT COLLEGES UP TO 1910

By MARY LOCKWOOD MATHEWS

Head of the Department of Home Economics, Purdue University

In earlier years many of the teachers employed in the elementary and secondary schools had received practical home experience in housekeeping or had been trained in cooking schools, such as the New York Cooking School, Boston Cooking School, and others, or were graduates of colleges, universities, or normal schools, who had taken the courses offered in home economics in these institutions. Because of the type of teaching done in the public schools much opposition from educators was met in introducing home economics in the curriculum of the elementary or secondary school, and it was argued that such work could be given to the girl by the mother in the home.

During the conference on "home science" at the Lake Placid Club, New York, September, 1899, it was announced that among the topics to be discussed was "The training of teachers of domestic science." In the following year, at the same place, in July, 1900, Miss Mary A. Nicholas, of the State Normal School at Framingham, Mass., told of the practice classes from the eighth and ninth grades of the public schools of the town which received instruction from the seniors in the household arts department of the normal school. "At that time this course at the Framingham Normal School was the only one being offered in normal schools." In the same year it was reported that Lewis Institute in Chicago "does not try to train teachers, but pupils can obtain practically the same preparation for teaching as that afforded at Framingham," which was very generally the case in all the higher institutions offering courses in home economics at this period.

In September, 1902, in making a report before the Lake Placid conference on "Courses of study in home economics in colleges and universities," Mrs. Mary Roberts Smith stated that of 41 State institutions replying to a questionnaire, 5 in the Southern States re-

ported no women students, 6 averaged less than 25 students each, and 2 Northern States (Maine and Pennsylvania) have a very small number of women, thus leaving 28 which might be properly expected to offer some "courses related to the household and the family." Of these 28 institutions approximately 13 offered such courses. It is evident, therefore, why training teachers of home economics played a very small part in the efforts of the universities of this period. Most of the schools had not yet developed well-defined home-economics courses. This same year it was stated, in a report on the subject:

> At the present moment the most feasible, if not the ideal, method of promoting the development of home economics in colleges and universities is not to urge the organization of a separate technical school, but to secure the introduction into departments of physiology, chemistry, economics and sociology, and architecture of courses modified to their immediate aim. This has already been done whenever there has been among the faculty of the institution a highly trained person who had a special interest in promoting a course in home economics.

In 1903, Dean Sarah Louise Arnold, of Simmons College, said in discussing the training of teachers of home economics:

> The teacher of home economics must deal for the next half century with a subject which has not yet been so organized that it appears in its complete and essential relations to other subjects or that it presents a systematic and coherent body of knowledge.

The ideal training suggested for home economics teachers was further stated by Dean Arnold as follows:

> The relations which are established between home economics, the sciences, literature, history, and human life go to show that the first foundation for the teacher of household economics is a liberal education, which will enable her to recognize these relations, to glean from every field that which is necessary for her garner. Her function is not that of original discoverer. She must apply to her province, the home, that which others have learned in their special fields of science or art. The time for a course in household economics, then, is after a liberal education. The teacher of household economics should be liberally educated. Without such an education she must fail to comprehend the true relation of her province to the knowledge of the world. We should note here, however, that one function of the teacher of household science is to make plain the relation of science to the everyday household arts, and to lead the way to a better and saner practice. To this end it is essential that she should be a skillful practitioner as well as an expert in theory.

In 1904, Miss Hunt, of the University of Wisconsin, declared:

> Because its content (home economics) is of immediate practical value and because there is a great demand for teachers in the lower schools there has been an unusual temptation to present the subject matter in an elementary or a professional manner. We believe, however, that there has arisen among those who are actively engaged in home economics a class of teachers who are able to present the subject in such a way as to give it pedagogical rank with other

college work, whether it be developed as a separate department or in connection with the department of science or economics or of sociology.

Mrs. Ellen H. Richards, in reporting on "Courses of study in home economics in higher education," in 1904, said that out of 36 institutions, including the State universities, which were studied, professional work was "meagerly offered in only two or three."

On the other hand, it was felt that the teaching of home economics in the secondary schools was also of inferior grade. For example, the following statement, made in 1905, expresses the prevalent opinion relative to the teaching of home economics in the secondary schools:

> The method of teaching the subject is, on the whole, far below the standard required in other subjects. Where methods in teaching other subjects have made such rapid strides in the last few years, the method of teaching this subject is as poor as it was in other subjects many years ago.

As a result of such expressions the Lake Placid conference, in 1905, reported that:

> The important questions to discuss next are, How shall teachers of domestic science, of home economics, be trained? Shall we encourage such training in small technical institutions, where any broad thought of education is secondary? What are good methods in teaching the subject?

About this time Ohio State University announced that the home economics department had three purposes, one of which was to offer to those young women who look forward to teaching or to other professional work the opportunity to take a four-year course in domestic science and domestic art leading to the degree of B. S. in domestic science. The University of Illinois reported that "the request for a teachers' course is so urgent that one will be offered in this department (home economics) in connection with the school of education now being organized in the university." A new course was offered during the summer session of 1905 by the University of Illinois in the interest of rural-school teachers. Twenty-six students were enrolled, six of whom were men. The University of Wisconsin the same year stated:

> We stand for the training of teachers. We give no distinct normal course, but we teach the subject of home economics, and we bring also before the student the object and social value of the teaching of the domestic arts in the lower schools. Our summer courses are primarily for teachers.

The Kansas State Agricultural College in 1905 reported a teachers' course of 10 weeks, 4 hours daily, beginning the latter part of May and lasting till the 1st of August.

In 1907 the teaching section of the Lake Placid conference was formed "to meet the general demand for a society the main purpose of which is the study and discussion of vital problems in the

teaching of home economics and household arts." During this discussion it was pointed out that courses in pedagogy should be included in the college or university course for training home-economics teachers. At this conference also a committee was appointed "to report on what should be required in the training of teachers." In making a report in 1907 on the "Training of teachers of home economics in the agricultural colleges," it was stated that:

1. In all the agricultural colleges technical courses were first introduced and the training of teachers of the subject was a later development.

2. The main aim in all these institutions continues to be to train for better home management, and, with the exception of Iowa and Washington, and possibly Michigan and Utah, the training of teachers is quite necessary.

3. The normal course in every case required four years for completion, and with three exceptions graduation from high school is required for admission.

4. Some pedagogic work is given in all the institutions except Connecticut and Utah, varying in amount from a 10-weeks' course in psychology and methods of teaching at Oklahoma to such courses as are given at Iowa and Washington, including one year's work in history and theory of education and courses in methods of teaching domestic economy. In only four institutions is there any provision for practice teaching; apparently in none of the colleges is there any regular provision for practice teaching with classes of children. There is some difference of opinion among the schools as to what constitutes the training of teachers. Considerable pedagogic work is required in all, except Purdue, Wisconsin, and Nebraska. Special courses in methods in home economics are given in Ohio, Illinois, Tennessee, Minnesota, and Idaho, and practice teaching is done everywhere except at Nebraska and Wisconsin.

5. Iowa and Washington, possibly Michigan and Utah, are the only agricultural colleges sending out any considerable number of teachers of home economics.

In a report on the "Status of the training of teachers of home economics in the United States, 1907," by Dr. C. F. Langworthy, 16 land-grant colleges were listed as "institutions which train teachers in home economics."

An example of the type of teacher-training work being done in the land-grant colleges at this period is summed up in the report from the University of Wisconsin, June, 1909. Courses given in the department of home economics of the college of agriculture include—

a general course in home economics including supplementary work in pedagogy which will prepare students for teaching domestic science in the grades and high schools. For advanced students a teachers' course will take up more advanced problems and an opportunity for special investigation in home economics will be offered.

In States where the teaching of home economics in the seventh and eighth grades was required by law much difficulty was met because there were not enough trained teachers to do the work nor enough money available to furnish good equipment or teachers. In Indiana, in 1912, Purdue University offered a six week's summer course for teachers, in which courses of lectures and laboratory work were

arranged to give a survey of the field to be covered, at the same time offering help in organizing the work. This course did not give the teacher any college credit but large numbers of teachers attended.

(2) HOME ECONOMICS TEACHER TRAINING IN LAND-GRANT COLLEGES FROM 1910 TO 1920

By FLORENCE HARRISON,

Dean of College of Home Economics, State College of Washington

---

Up to 1910 the training of teachers of home economics consisted largely of one course known as the teacher's course. The problems of curriculum making, the place of home economics in elementary and secondary schools, the content of courses, and the necessary equipment and its cost were discussed. What should be taught in the elementary and secondary schools and how the training for elementary, secondary, and college teachers should be differentiated had been the concern of the teaching section of the Lake Placid conference, and later, the American Home Economics Association. Students who expected to teach were encouraged to take courses in the education departments or schools. These courses were largely courses in psychology and the history of education.

Courses which gave a background of appreciation of the problems of educating people were given; very little specific help in the more immediate problems of "how to put a lesson across" or "how to get the interest of the child mind" was given. The practice given in teaching special lessons was largely a problem of organizing subject matter and getting the laboratory lesson finished in the allotted time. The course was planned to give the student an appreciation of some of the problems of teaching and handling of grade or high-school pupils. The emphasis was placed upon the fact that the practice teacher had some subject matter, which was supposed to be that which the student needed. This subject matter the student teacher presented to her pupils in a logical manner. Practically no opportunity was given for a teacher to develop any real teaching owing to the small number of lessons presented and inadequate practice field. This work was sometimes given in grade schools, high schools, settlement classes, and sewing clubs. Practice in "type" lessons and demonstrations were often given by students before classes of which they were members. This was in no way comparable to a real teaching situation.

The report of the Association of Land Grant Colleges for 1910 shows that fundamentals for training of extension teachers were laid down. These fundamentals were psychology and the principles

and methods of education. A little later these were considered of importance to the teacher of home economics as well.

Statistics secured by Dr. Benjamin Andrews show that in 1912–13 there were "1,788 students in preparation for teaching in 56 colleges. Of the total 5,547 students reported in home economics courses, 32.2 per cent are preparing for teaching." The foregoing statistics come from about 35 per cent of the colleges teaching home economics in 1912–13. Since the institutions reporting were the more important colleges, and the total registration represented two-thirds of the college students in home economics, the figures are fairly representative. The college courses for teachers of home economics in land-grant colleges for 1912–13 show that attention was given to such professional courses for teachers as psychology, educational psychology, history of education, general and special methods of teaching, and practice teaching.

Doctor Andrews states that 57 colleges provided practice teaching in home economics. From 2 to 60 lessons (with a mean of 15–16 lessons) are required by 9 colleges; from 24 to 320 hours (with a mean of 75–100 hours) are required by 9 colleges; and from 2 to 60 weeks (with a mean of 20 weeks) are required by 28 colleges. Twenty lessons or 20 weeks, probably equivalent amounts, may be taken as the usual amount of practice teaching required by the college in training home economics teachers. In many of the college and university summer schools, home economics courses were usually organized for teachers.

In a paper on "The training of high-school teachers in an agricultural college," published in the Journal of Home Economics, April, 1916, G. M. Wilson says:

This article is confined to the experience of Iowa State College in the training of teachers of home economics. A recent study of agricultural colleges in the Middle West makes it evident that such colleges are making a particular effort to train teachers of agriculture, home economics, and manual training. There is considerable evidence that most of the 600 women students of the Iowa State College are looking forward to teaching as their immediate career. Forty out of 42 women in the senior class in home economics expected to teach. The present courses in domestic science and domestic art require six hours' work in education, with the course in practice teaching [illegible]er work is elective. Yet more than half of the present class will meet the r[illegible]irements for the first-grade State certificate; that is 14 hours in education and 6 hours in psychology. Practically all of next year's seniors will meet the 20-hour requirement. Courses in home economics are a course on domestic science and a course in domestic art. Analysis of these courses show the following requirements: Domestic science, 19⅔ hours; domestic art, 22⅔ hours; science, 48⅔ hours. A total of 30 hours of English literature, history, language, mathematics, sociology, and public speaking are required. The eight hours of elective are used chiefly in the field of education, in order to meet requirements for certificates. The home economics students who meet the requirements of the State board, with reference to first-grade certificates, take their professional training about as follows: In the sophomore year they take a three-hour course

in general psychology, followed by a three-hour course in educational psychology. In the junior year they take a three-hour course in methods of teaching, dealing with factors in the teaching process, types of lessons, the steps in each type, the assignment, questioning, lesson plans, and similar topics. This course is followed in the same year by a course in principles of education, which was modified, because of the needs of students, by taking a third of the time for problems of classroom and general school management.

The particular work in education for the senior year is a three-hour course in special methods and practice teaching running throughout the year. * * * The work is organized from the fifth grade through the second year of high school. Each student teacher has at present a total of 18 lessons under the direct supervision of a competent critic teacher, and the director of practice teaching, who gives the special methods in this course, frequently visits and observes the teaching work and always follows such visits by a conference with the student for the purpose of discussing the work.

The work in special methods, carried on with the practice teaching, reduces and brings in usable form the previous work on lesson planning, assignments, and questioning, but its particular problems are the making, criticizing, and executing of 36 lesson plans, and the organization of courses of study, particularly a one-year course of study in home economics properly balanced, and a four-year course in home economics. Each student is required to satisfactorily plan the necessary number of lessons and detailed work for these two courses.

Work upon equipment, examination, and criticism of texts is given.

Because of the fact that the teacher of home economics in the high school is frequently called upon for grade work, considerable attention is given to organizing suitable home-economics work in the lower grades and its proper coordination with the other school work. Also because of the increased attention, through legislation and otherwise, to home-economics work in the rural schools, some special attention is given to the organization of work for the rural schools, to providing equipment at slight expense and particularly to the organization of work around the hot lunch for the children in rural schools who come long distances and so can not return home for the noon meal.

A study of college catalogues from 1910 to 1920 shows that most home-economics departments in land-grant colleges designate the course which deals with teaching problems as the teacher's course. Pennsylvania State College is probably unique in using the title of education for the course in methods of teaching in 1910. A requirement of philosophy was set up as a prerequisite for the course. Two courses, Education 1 and 2, each two credit hours, were listed under the home-economics department. By the year 1916 the course included three credits of psychology, three credits of history of education, three credits of principles of teaching. Methods of teaching was divided for those teaching domestic art and domestic science. Observation of teaching was provided for classes in domestic art, for which five credits were given. Preparation of reports and 20 observations during the semester were required. Other courses offered were methods of teaching and the theory and practice of teach-

ing domestic art. Classes in domestic art were taught. One course in psychology and two courses in education were prerequisites of the course. One credit hour was allowed for lecture work and two credit hours for teaching.

Those students taking the domestic science course could take an abridged course in methods of teaching, covering the lectures in the foregoing course, but it did not include practice teaching. The same psychology and education courses were required. One credit hour only was given for this work. These prospective teachers had a course in the observation of teaching and two courses in methods of teaching in domestic science, with teaching of classes in cooking and sewing. In other words, observation and methods of teaching were offered as follows:

For domestic art teachers.

Domestic art 21—Observation of teaching; 5 credits for 1 semester.
Domestic art 22—Methods of teaching; 3 credits for 1 semester.
Domestic science 24—Methods of teaching domestic science; 1 credit for 1 semester (abridged course).

For domestic science teachers.

Domestic science 23—Observation of teaching; 5 credits for 1 semester.
Domestic science 26—Methods of teaching; 3 credits for 1 semester.
Domestic art 23—Methods of teaching; 1 credit for 1 semester (abridged course).

Another course (domestic science 25—methods of teaching) includes the theory and practice of teaching home economics. Consideration of the relation of home economics to education and its place in the curriculum was given. Observations of lessons and teaching of classes in sewing and cooking were also included, for which three credits for one semester's work were given. This school probably had the largest number of courses in methods, observation, and teaching at that time.

Cornell University stands out as the college offering summer session work in home economics for rural schools. In the school year 1918–19 vocational work in clothing was added, and required of, and open only to students who expected to teach in vocational high schools.

In the Middle West practically all the land-grant colleges were giving training to prospective teachers. For a year or two after 1914 many colleges used the short courses for housekeepers as practice fields. In the University of Minnesota the teacher-training section was organized by Miss Josephine T. Berry in 1913. Prior to that time there had been no definitely organized work except some practice teaching done in domestic science. It was carried on in the school of agriculture classes under the direction of Miss Ella Pine, an instructor in foods, up to the year 1917. In 1915 the student teaching was made compulsory for those who desired to obtain a

A. "PATSY," THE FIRST PRACTICE-HOUSE BABY

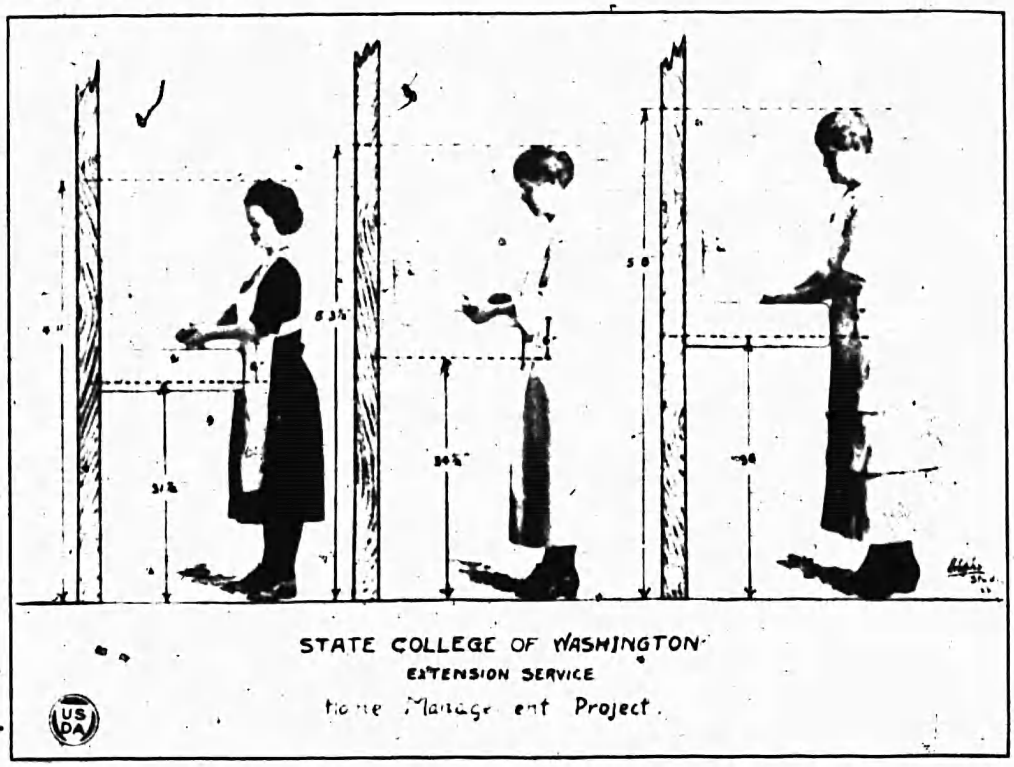
B. "BOB" AND A SENIOR STUDENT IN PRACTICE HOUSE, HOME ECONOMICS DEPARTMENT, OREGON AGRICULTURAL COLLEGE

A. CLASS IN HOME ECONOMICS ART ROOM
IOWA STATE COLLEGE

B. HOME DEMONSTRATION PROJECT IN DIETETICS

A. HOME DEMONSTRATION PROJECT IN MARKETING

B. HOME DEMONSTRATION PROJECT IN DRESSMAKING



A. PROJECT SUPERVISED BY HOME DEMONSTRATION AGENTS

B. GIRLS' CLUB WORK

university teacher's certificate. Since 1917 the home economics classes in the university high school have been utilized for student teaching.

The University of Wisconsin has carried on teacher-training courses during the entire decade under discussion. The needs of this State were met by inaugurating in 1918 a temporary training course for vocational teachers, so that the number fulfilling the Federal board requirements would be increased to serve the State's demand. This course continued for three years. Most of these graduates have returned to college and have received their degrees from the four-year course.

In 1913 the general training course was changed so that, in addition to the general education major, there were also a food major and a textile major. In 1919 there was added a vocational education major in home making.

At the Kansas State Agriculture College, in the school year of 1912–13, a department of education under the title of "Rural and vocational education" was set up. The staff was made up of professors from other departments. Under this department there was given the required work for a State certificate as follows: Educational psychology, history of education, principles of education, school hygiene, school administration, observation and technique of teaching, practice teaching, and home economics education. In 1915–16 provision was made for the work through the employment of a woman, ranking as assistant professor and listed as a member of the faculty both in the division of home economics and in the department of education.

The change in the amount of time devoted to practice teaching is shown by the following from the University of Kentucky. The first teacher training course in home economics was offered in 1912.

1912—Practice teaching offered for 1.2 credits.
1913—Teaching of home economics, 2 hours a semester for 1 year.
1914—Teaching of home economics, 2 hours a semester for 1 year.
1915—Teaching of home economics, 2 hours a semester for 1 year.
1916—Teaching of home economics, 3 hours for 1 semester.
1917—Teaching of home economics, lecture, 3 hours; practice teaching, 3 hours per week for 1 year.
1918—Practice teaching, 3 hours for 1 year.
1919—Technique of teaching home economics, 2 hours per week for 1 semester.
1920—Technique of teaching home economics, 2 hours per week for 1 semester; practice teaching of home economics, 4 hours lecture, 4 hours laboratory for 1 semester.

In the West the University of Idaho has given some teacher training courses since 1910. Practical experience in teaching in 1910 consisted of supervising evening classes and short talks in both

domestic science and domestic art to various societies in the institution. In 1914 and 1916 practice teaching was supposedly carried on under the supervision of the education department, and was so conducted until 1920, when joint supervision was assumed by the head of the school of education and the head of the home economics department.

The University of Nevada, the State College of Washington, and the Oregon Agricultural College introduced teacher training courses about the same time. The first two established courses in 1917, followed by Oregon in 1918.

In the South teacher-training work was introduced into the University of Arkansas in 1914, while the University of Tennessee began in 1917. Thus we see by the year 1917 that provision was made in the land-grant colleges for professional training for teachers of home-economics subjects. These courses in education were not part of the regular home-economics curriculum, but comprised a group of courses taken by those preparing to become teachers. The courses offered varied in character and extent in the different States. The variations were due to local points of view, local limitations, State requirements, and type of organization of the college. Certain general courses in education and special courses in methods of teaching home economics and practice teaching were provided. State requirements for certification vary from 10 to 36 credit hours, on the basis of 120 hours of the college work. Twelve to 15 credit hours constitute the average. While much of the practice teaching was done in cooking and sewing, the colleges were establishing the right standards and ideals of home making. By the passage of the Smith-Hughes Act home making was recognized as a vocation of national importance and fundamental to its welfare. Under the stimulation of the Federal aid for improvement of the training of teachers of home economics, additions and modification of the courses were made. New courses and instructional force were added to the college curriculum and staff. Practice cottage and practice teaching work were strengthened. Attention was given to a closer correlation between the art and clothing and science and food courses. Courses in child care and training were introduced, as well as instruction in clothing for children. Plans for follow-up work with teachers in service and improvement of teaching in the field were made and carried out by those States where Federal and State aid made it possible.

By 1920 we see the schools of education and the departments of home economics carrying out cooperatively the preparation of teachers of home economics for day-school classes, part-time schools, and continuation and evening classes, and offering more definite courses of study designed for training teachers of related subjects as well.

During the past 10 years there has been a steady tendency toward more uniformity in content of courses, in methods of instruction, and in the organization of courses of study. Considerable intensive work in classifying and arranging its material and defining its aims and objectives has been done by the land-grant colleges. The scope and method of presenting the work have been improved.

Home economics has been introduced into the land-grant colleges in the South. Teacher-training courses have been set up in Tennessee, Maryland, and Georgia. Virginia expects to establish a course very soon.

With the steady improvement made possible in the past 10 years, home-economic teachers should be well trained and better able to cope with the situations they meet, and should establish those definite standards and ideals which are necessary for rational living in the home and the community.

(3) TRAINING OF VOCATIONAL TEACHERS OF HOME ECONOMICS

By ADELAIDE S. BAYLOR

Chief, Home Economics Education Service, Federal Board for Vocational Education

---

The first institutions in the United States to be approved for the training of teachers of vocational schools and classes in home economics after the enactment in 1917 of the vocational education act were land-grant colleges. In every State in the Union, with possibly three exceptions, land-grant colleges admitting women were designated for this work. This meant the approval of 39 white and 10 negro land-grant colleges for training vocational teachers in home economics. This represents approximately 70 per cent of the total number of institutions in the United States approved for this type of training. One of the purposes of the land-grant college is to promote home economics education, and it was therefore logical to turn to these institutions, with their plant, equipment, technically qualified faculty, and already well-developed courses for the training of home economics teachers, as the agencies for strengthening the training for vocational teachers of home economics.

The expenditures for the training of teachers of vocational schools and classes in home economics in the past five years are, in a way, a measure of the growth of the work. The following table shows approximately the increased amount of these expenditures:

Increased expenditures for teacher training in home economics, 1918–1922

	Federal money	State money
United States:		
Total in 1918	$60,037.61	$85,358.85
Total in 1922	212,833.66	282,708.89
Increase	152,796.05	197,350.04

These statistics show that the increased expenditures from State funds exceed those from Federal funds by approximately $45,000, a convincing evidence of the appreciation by the States of this type of instruction.

In a large number of institutions one person is made responsible for teacher training, thus relieving the head of the home-economics department of this important responsibility and allowing her greater freedom for developing instruction in technical lines. The person in charge of teacher training works in cooperation with both the home economics and education departments, and is enrolled as a member of one or both staffs. By such an organization, supervised teaching has been improved and extended, special methods of instruction more carefully worked out, and provision made for a general outlook on vocational education.

The standards for teachers of vocational schools in home economics set up in State plans have called for better trained home-economics teachers in the schools, and this has, in turn, created a need for well-qualified teachers to train them. The reorganization of the work, with specialized courses not only in new technical subjects but in the methods of teaching, has also called for well-trained experts on the teacher-training faculty. With increased funds through the Federal and State appropriations for teacher training the land-grant colleges have been meeting these demands.

In 1917 there were only 10 land-grant colleges with practice houses for supervised home management, while at the present time there are 34 land-grant colleges with practice houses and 3 with apartments for supervised home management. In one white land-grant college there are two practice houses, and in another a practice house and an apartment. Students in teacher training reside in the practice houses for from 4 to 12 weeks during their senior year. Occasionally there is a brief period of residence in the junior year. Of the negro land-grant colleges, one has a practice house in the process of construction that will be ready for occupancy next year. In several of these institutions an excellent program of cooperation between the dormitories and home-economics department has been worked out for supervised management.

In the training of home-economics teachers in professional subjects the project method of instruction has been emphasized. Students in training have been required or urged, in connection with their technical work, to undertake special projects in the summer time. With this experience as a background they have been better prepared to direct projects in home economics with the pupils in their supervised teaching classes.

In 1917 five land-grant colleges used public schools for supervised teaching in home economics. At the present time 34 white land-grant colleges use local or near-by public schools for this purpose. All institutions approved for the training of vocational teachers in home economics have been urged to provide for supervised teaching in public schools in addition to that in the training school of the institution in order that students may teach under supervision in schools that afford practically the same conditions they will meet when they are regularly employed as teachers. In many of the land-grant colleges supervised teaching is conducted in all-day vocational departments. The number of lessons taught under supervision has been increased and a clear distinction made between observation and supervised teaching. In the majority of these approved teacher-training institutions not less than 36 lessons are taught by student teachers, and in two or three institutions a careful system of apprentice teaching has been developed. A standard of 100 per cent supervision available for student teaching has been pretty generally accepted.

Provision has also been made in several land-grant colleges for members of the staff to visit the new teachers in the field and give them training while in service. In only one or two institutions, however, has this been made the sole responsibility of a single individual on the staff, who is designated as an itinerant teacher trainer.

Chapter XI

HOME ECONOMICS RESEARCH IN LAND-GRANT COLLEGES

By MINNA C. DENTON

Specialist in Foods and Nutrition, Bureau of Home Economics, U. S. Department of Agriculture

---

If we consider home economics subject matter from the standpoint of the materials with which it deals, we have four distinct divisions: Food, clothing, shelter plus equipment, and human beings, with whose reactions to the commodities first named, and to each other in home relations, we as home economists are essentially concerned. If we consider our subject matter from the standpoint of fundamental home activities belonging to the province of the home-making woman, we have, first, selection of these commodities consumed in the home, and to some extent of the human relationships within it; second, physical production of the finished form in which these commodities are consumed, and of the family itself; third, care of commodities, equipment, and of members of the family; fourth, the management factor which includes coordination and harmonization of physical performances within the home, as well as of spiritual details; fifth, the education work involved in the training of children; and sixth, those activities of the community not otherwise provided for in its organization, whose special aim is to promote the interests of the home.

From the standpoint of fundamental subject matter we are, of course, dependent upon physical, biological, and social sciences; more particularly upon chemistry, physics, bacteriology, physiology, psychology, economics, sociology, and esthetics. Needless to say, many of these sciences have not as yet developed to any considerable extent those phases of their subject matter of which we most stand in need. Chronologically, physiology is not a young science, yet it is able to offer us little in the way of genetics as applied to the human race—which deals, of course, with the very foundations of family life. Colloid chemistry is developing rapidly, but can not tell us wherein lies the strength of wheat gluten nor why a jelly jells. So far physicists have not done much to help us with the practical details of household fuel conservation, such as the proper design of cooking stoves and utensils; nor with appropriate physical tests of

household fabrics. Bacteriology, like home economics, is primarily concerned with health problems, yet its utterances on such homely topics as the sanitation of house cleaning or of dish washing and the conditioning of indoor air are not altogether concordant, and are mostly confined to problems of institutional rather than of domestic management. Psychology has still to accomplish a large part of the task, the establishment of norms for the mental development of the child at the different preschool ages, as has physiology in outlining norms for the physical development of girls and women at any and every age. Sociology has hardly more than scratched the surface of its field in designating standards of living; economics is only just beginning to share the attention it has perforce given certain of the more immediate problems of finance, with those of the economics of consumption; and as for esthetics, even if we ignore altogether the point of view of the fine arts, how many scientists would be willing to admit that esthetics can ever be fundamentally rationalized?

Much the same state of affairs exists between home economics and the other practical arts. Manufacturing interests have too often been concerned with the production of household articles easy to sell and requiring frequent renewal rather than with those calculated truly to conserve natural resources and human energy. Engineers have often studied the principles of efficiency and conservation as applied to other industries, seldom as applied to the aids used in home industry. Medicine, which once concerned itself only with bedside or latterly with preventive work, promises at last to awaken to the problems of attaining maximum efficiency and high degree of vitality for the human mechanism—which are among the grand determining factors of spiritual welfare. One of our strongest allies, so far as college organization is concerned, sometimes appears to ask us, "How can we most easily induce the people of America to consume those things which, as a result of well and ill-founded market calculations, and of the success with which we have run the gauntlet of weather and other hazards, we have this year raised up from the soil?" instead of asking, "What animal products and vegetable crops should we attempt this year to raise, in order to satisfy right standards of living among our people?" Education has too often stopped at the door of the schoolroom. As for the empirical practitioners of the fine arts—artists, architects, costume designers, men of letters, and musicians—how many of them believe that psychological science holds or will ever hold the scientific foundation upon which art principles, in order to hold eternally, must be founded?

The several illustrations given in the preceding paragraphs serve as but faint indications of the unknown regions into which the sciences have barely begun to penetrate, but which must be at least

roughly charted before successful attack can be made upon many of the great problems of the home-making woman. Her calling has always been recognized as dealing with home production and management activities, and it is in these phases of her work that the sciences have been most inclined to be active. Not universally have we been quick to recognize the intimate concern of this calling with the details of ultimate consumption, a term which must include the important affair of living a successful life, apart from the business of earning the means of subsistence.

It is necessarily true that the home economics group, hardly more than 20 years old, has organized college departments largely along the lines of service work; that is to say, our subject matter has been acquired chiefly through library rather than through fundamental laboratory or field investigations. Most of our ablest women have found their time monopolized by problems of curriculum organization, administration, development of appropriate classroom and field method of instruction, and coordination of our work with that of other agencies. Thus it is that even so late as 1923 we may count almost upon the fingers of one hand, certainly upon those of both hands, those departments in land-grant colleges where even a single member of the home economics faculty in possession of the Ph. D. degree is in charge of research work. This does not mean that our leaders are not as a rule alive to the imperative need for home economics research. It means rather that they have been fully occupied with the task of demonstrating to our citizenry that home economics has even now something to offer which the world can not well afford to do without. It means that, being under the necessity of serving ever-increasing numbers of college freshmen through their four-year course, it has in many instances been expedient to send advanced and graduate students into the laboratories of other departments for their problem or research work. It means also that college administrators and heads of science departments have too often been difficult to convince when the demand comes for home economics research laboratories. "Why this duplication of equipment and apparatus?" they sometimes inquire. "What could you do in a science laboratory in your own building which could not be equally well or better done in our chemistry or biology buildings?"

The answer to these questions is much the same as must have been the answer long ago, to those objectors who saw no use in founding separate schools of medicine, engineering, and agriculture. Why could not the facts of human physiology and pathology have been established within a department of zoology? Why could not the problems of agriculture best be studied in the chemistry and biology departments of a college of literature, arts, and pure sciences? It is undeniable, indeed, that most important contributions have been thus

made; and home economics has every reason to encourage all such research to the best of its ability. But the establishment of research within the home economics department itself is essential for at least three reasons.

1. It is a self-evident proposition that research specialists of any given type, whether women or men, who are paid exclusively from home economics funds to do home economics work, will give it more service than those who divide their interests between this department and some other; that segregation of specialists in the home economics group should make them more keenly alive to its interests and needs than if they belonged to a different organization unit.

2. When research specialists from the different sciences shall come together within an acknowledged home-economics group, then for the first time will some of those research problems whose solution is most vital to the home begin to take definite shape. For it is one thing to sense a practical situation which should be relieved after thorough investigation, and quite another to discern clearly the problems involved. Farm women have too little leisure, hence become discontented and induce their families to leave the farm. In any such concrete situation it is the problem chiefly of the household engineer who should devise suitable labor-saving equipment; that of the economist interested in organizing cooperative laundries and bakeries or perhaps those mail-order and parcel-post facilities which bring ready-made products to the farm door; that of the sociologist who would so standardize a household helper's working day as to attract certain classes of hired labor; that of the medical man or social worker who feels it wrong not to teach safe contraceptive methods; that of the agriculturist who is developing such minor industries as poultry raising, which supply the woman with funds for coveted aids and improvements; that of the community organizer who may induce her to participate in the right form of social recreation; or that of the artist or biologist whose discoveries can arouse her enthusiasm for the wonders of nature all about her. It would be a pity to neglect expert advice which is the result of thoroughgoing investigation by any or all of these specialists.

3. Familiar, every-day contacts with research workers and the results of their work are highly desirable features of the education of all teachers; nor should such contacts cease during the professional life of the teacher of women and men, whether her field be that of the classroom or of the extension service. Therefore the home economics department should afford opportunity for genuine research, in order that such contacts may readily take place, if for no other reason.

In other words, the home economics group needs above all else to develop solidarity of consciousness as to the nature of its greatest

problems and to achieve fusion with the great thinkers of other groups. The ancient "clinging-vine" policy which falls back upon the plea that "there is no sex in science," and "there is no need for us to accumulate a stock of first-hand knowledge, since other departments already so far in the lead can do this work so much better than we can," is still reflected by a few of our leaders; but most of them see very clearly that if we do not begin the earnest study of our own problems we can not expect much aid from those less directly affected by them.

What sort of beginning in research have the home economics departments of the land-grant colleges already made? Of their few specialists who have attained the doctor's degree, all but one (so far as our present information goes) are physiological chemists. This disproportionate growth in a single field is but a very natural result of the relatively extensive and general development of research methods in chemistry, and of the great stimulus under which the science of nutrition has been working during the past few years.

Although inclusion within the faculty of a variety of research specialists, thoroughly trained in graduate work in their respective fields (and by further experience in research, if possible), would seem to be a sine qua non, yet it is true that the doctor's degree does not always insure forthcoming research; and that research of high order may be accomplished without it. Of course it is also true that heads of home economics departments seeking to make a beginning in research, do not wait until able to furnish their own laboratories and acquire their own specialists, but very wisely cooperate with other departments already in possession of research facilities; for this is undeniably much better than doing nothing at all. However, to include in our list those few research specialists working in home economics departments of land-grant colleges who have other training than the doctor's degree, and those theses done by home economics graduate students under them or in cooperation with other departments, does not alter the statement that this research is as yet almost exclusively concerned with problems of food and nutrition, together with a few in general metabolism and possibly one or two other fields in physiological chemistry. Only within the past two or three years have problems in the physics or chemistry of textiles or in educational methods begun to appear in the lists of masters' theses from land-grant colleges. So far, bacteriology, economics (except for institutional economics), sociology, and psychology (apart from studies in education methods) have each furnished hardly more than one or two of the studies listed.

A number of studies have been reported from a field sometimes designated "experimental cookery." These are concerned with such homely questions as the relative shortening values of different culi-

nary fats, the conditions under which pectins jellify, and the effect of varying altitudes upon the formulas by which different types of cake should be made. Problems of this sort have often been unsuccessfully attacked, the most frequent causes of failure being lack of recognition of all factors involved, lack of standardization of experimental procedure, failure to report it accurately, and (above all) lack of an objective end point by which results are evaluated. Most experimental cookery problems belong to the province of physical chemistry, and involve such matters as changes in surface tension or in rate and manner of aggregation of crystalloid and colloid particles; or the effects produced upon such aggregates by varying hydrogen or hydroxyl ion concentrations or by small amounts of various electrolytes. Although thorough and up-to-date scientific preparation is necessary successfully to attack such fundamental problems, we must not lose sight of the fact that much time is saved and some general principles are at least roughly approximated by carefully controlled use of cooking tests whose end point can be stated objectively. Certainly no problem presents a more formidable list of variants difficult of standardization than do the problems of cake making. yet it has proved possible even in preliminary experiments to arrive at some of the principles of adaptation to varying altitudes, through careful standardization of formulas, materials, utensils, and procedure, by workers well trained in fundamental scientific method. It is natural that home economics students should take a great interest in these "field tests," and it seems desirable that a manual of suggestions for standardizing such methods should be prepared.

It appears that very few women, whether or not interested in home economics, have been attracted to specialize in physics and engineering, possibly for obvious reasons. Unless this condition should change soon we must expect that all our research specialists in household engineering will be men. Possibly this is a matter of importance chiefly from the standpoint of salary schedules.

On the other hand, many women have been granted degrees in medicine, but not many of these women physicians have done the research nor even pursued those college courses necessary thoroughly to equip them, from the standpoint of the modern science of nutrition, for original work in nutrition clinics. Medicine would appear to be a very good field for our home-economics women wishing to specialize in nutrition, since no nutrition specialist can hope to become the court of last resort without medical training.

At the present date two of our home-economics women are known to have attained or to be entered for the Ph. D. degree in public health. Since health education is rapidly becoming a matter of

common concern, this field also should offer us promising opportunities within the near future.

What shall be said for the land-grant colleges, as to existence of research specialists having the "home economics" point of view, and also equipped to do research within college departments of economics? We are accused, and apparently with some degree of justice, of having misappropriated the title "home economics," since we know so very little about economics; also of having done nothing to encourage our graduate students to equip themselves in this science. Our feeble defense is that the economists themselves have mostly failed to point the way in which we might go; that studies of the economics of consumption, even from the standpoint of producer and distributor, are hardly so much as begun; that other studies in the economics of the home are almost entirely lacking; that opportunity for the women seeking to study such problems has been hard to find. However, there are present indications of real activity within this field, and the near future will no doubt abundantly reward those who succeed in playing well their part therein.

In conclusion, it should be stated that the lists of theses above referred to are those compiled in 1921 and again in 1923 by the research committee of the American Home Economics Association. Our letters sent to all land-grant colleges and to an equal number of other colleges and universities asked for titles of all home-economics faculty research papers, and for all graduate theses, both published and unpublished, whether these were done entirely within the home economics department itself or in cooperation with some other college department. The lists now in our possession cover the years 1918 to 1923 for those institutions responding to our brief questionnaire, and appear to be fairly complete so far as land-grant colleges are concerned. About 25 or 30 titles, representing six or seven land-grant institutions, were reported in 1921, and these are published in the Journal of Home Economics, 1914, Nos. 4 and 5. Almost three times that number, representing twice as many institutions, have so far been collected from the same sources in 1923, although the period of time represented is now only two years instead of three as in 1921. Should not this increase in annual output augur well for the immediate future of home-economics research in land-grant colleges?

Chapter XII

HOME ECONOMICS EXTENSION

A. DEVELOPMENT, TYPES OF ORGANIZATION, ETC.

By MARTHA VAN RENSSELAER

Professor of Home Economics, New York State College of Agriculture, Cornell University

EARLY DEVELOPMENT

History has repeated itself not in time but in territory, as shown in the story of the development of home economics extension in the several States. Whether a State may have begun its extension work in 1900 or in 1917, much of its first work seems to have been through one or more of the following means: Bulletins, single lectures, extension schools of from three to five days' duration, study clubs, exhibits at fairs, short courses at the State college, demonstration and exhibit trains, and correspondence. Such humble beginnings were made as sending out an undergraduate to give demonstrations in cooking, or engaging the interest and services of resident instructors for occasional field lectures.

When salaried positions began to be created, in most States they were for farmers' institute work, in other words, for employing practical and successful homemakers for short-time lecture tours.

Later came the general home economics "specialist," a trained person employed to do extension work only, but expected to cover all home economics subject matter from the feeding of children to labor-saving equipment.

In some States extension work led to the organization of resident courses of instruction at the State college. In these first years existing organizations, such as granges, women's clubs, church societies, and the farm bureaus requested assistance and cooperated generously in local arrangements for meetings.

A substantial foundation for the organized and intensive work that was to follow was built by these scattered efforts to spread information on everyday household questions to home makers in the various States. Out of these early beginnings, made by a few leaders with unusual foresight in the possibilities of the American educa-

tional system, grew the present network of organized extension education which covers the country. The old touch-and-go system, with its inspiration, was not without its achievement, since it spread information, won respect for the body of technical subject matter that was accumulating for home makers, and created an attitude on the part of the public that favored expansion.

RECENT DEVELOPMENT

With a home demonstration agent resident in a county, the local women and the college specialists have a channel for communication and cooperation in their projects for local development.

On July 1, 1922, 46 States were employing county agents, and in the forty-seventh State a similar service was rendered in a different way. At this time, 800 counties had the services of home demonstration agents, and 975 women, not including the college specialists, were engaged in home demonstration work. In 1914 when the Smith-Lever Act went into effect, 279 counties were supplied with home demonstration agents. The maximum number of counties at any time receiving the service of agents was 1,715 in 1918, when war emergency appropriations were made. The total number of women engaged in home demonstration work at this time was 2,035.

The advantage of having a group of local women cooperating closely with the State college of agriculture and the Federal Department of Agriculture in working for the interests of the home and the community is that both short-time and long-time projects for advancement can be undertaken and definite progress in the work can be measured and recorded. In 1921 over 250,000 women cooperated with the agents in carrying on definite demonstration. In addition 300,000 girls were enrolled in club work, of whom 185,000 completed their work and handed in the necessary reports.

TYPES OF ORGANIZATION

Various forms of organization and cooperation have been worked out in the States. In the South, girls' clubs and women's clubs, cooperating with State agents, district agents, or county agents, have begun with canning and broadened their interests to include all phases of home making. The spectacular story of these clubs need not be repeated here. In the North and West the organization for the home economics work has paralleled the farm bureau organization, whether as one division of the farm bureau work or as a coordinate and cooperating association known as the home bureau. A supporting membership, with the community as the unit of organization, is the feature distinguishing it from the southern type of organization.

But growth of leadership on the part of local people and growth of community consciousness are apparent throughout the country, whether in the South from the work with clubs and individuals or in the North and West from a method approaching community organization.

Several States (New York, New Jersey, North Carolina, South Carolina, and West Virginia) have now reached the point of federating the county organizations which enables the rural homemakers of the entire State to act as a unit through their representatives.

NEWER METHODS OF EXTENSION EDUCATION

All the means of extension education employed in the early days are still in use, but a shifting of emphasis is apparent and certain new means are being adopted. It is recognized that the organization of subject-matter into lectures, demonstrations, and bulletins does not necessarily exhaust the possibilities, nor are these always the most effective methods of extension teaching.

The home-demonstration methods which originated in the South with the farm demonstration, have within the past four years come into widespread use in the North and West. As implied in the name, a woman demonstrates the value of a certain practice in her own home, following a definite procedure and keeping records, with a view to arousing interest among her neighbors in improved practices and encouraging their adoption. The educational value of such local demonstrations is only too clear, and the administration is fairly simple provided procedure and necessary subject matter and records are carefully planned in advance.

The spread of instruction through local leaders is a means of extension service which has been gaining ground in the last three or four years, and is becoming highly organized in a few States. The local leaders receive training from a State specialist in certain units of subject matter which are of greatest use to the housekeeper and in greatest demand by the majority of the communities. These leaders, then, pass on the instruction to their own local groups and also assist in administering local home or community projects to which this subject matter is related. From a county and State point of view, the administration of this type of work is complex (necessitating clearly made plans, most careful supervision, and the preparation of a vast amount of material in the way of directions, subject matter, and illustrative material. However, its results in the spread of improved practices, the development of leadership, and the extension of a specialist's influence seem to be sufficient to cause a steady increase in the use of the method.

Correspondence courses which can reach isolated homes and give the home maker the opportunity of consulting a specialist in regard to the problems that arise in her day's work seem to be opening up an extensive field for service and will doubtless increase in number as more specialists can be secured. The tax upon the time of a specialist is heavy if such a piece of work is to be well done, and as yet demands for field work are in general so great as to leave insufficient time for the office work required.

PROJECTS UNDERTAKEN

Projects undertaken by the local groups are directed toward improving practices in home making or home industries, such as feeding the family for health, health habits and home sanitation, care of children, household management, clothing the family, selection and use of household furnishings, methods of food preservation, home care of the sick, poultry raising, bee culture, butter making, gardening, and community enterprises which are closely associated with the interests of the home, such as improvement of the schools, recreation, and community houses.

FINANCIAL SUPPORT

The growth of the work may be shown from the financial point of view by the following figures: In 1914–15, $319,823 was devoted to extension work with women, while in 1922–23, $3,551,490 was set aside for this purpose. In 1914–15 the amount allotted to extension work with women was 9 per cent of the total funds for extension work, as compared with 18 per cent for 1922.

TRAINING OF PERSONNEL

Another evidence of growth lies in the higher standards of training and experience now required of county and State workers. Extension work is now a recognized field for professional service, for which college training may be received; therefore greater numbers of well-trained and well-qualified applicants are making it unnecessary to compromise professionally in favor of personality or other assets of a general nature.

The Southern States to a greater degree than the Northern and Western States have assembled their county and district agents at the State college for intensive training periods covering two or three weeks. This is a practice which will probably spread in other States as the county organization becomes so perfected that the agent can be spared for longer periods.

CONCLUSION

To insure sound teaching throughout this big educational system that has so recently developed, an adequate staff of specialists in each State is of the greatest importance. Moreover, it will be necessary that each State devise plans for the county agents to keep up-to-date in subject matter and methods of teaching, either by leaves or absence for graduate study or by short courses arranged to meet their particular needs.

The people have recognized the need for extension education; the leaders now must urge a wise division of funds to keep the instruction of the highest quality.

B. OBJECTIVES, METHODS OF TEACHING, ETC.

By GRACE E. FRYSINGER

Field Agent, Extension Methods, U. S. Department of Agriculture, Washington, D. C.

Fortunately the little red schoolhouse no longer bears alone the burden of educating the rural citizenship, for it is aided by many helpful hands of public, semipublic and private educational agencies. One of the newest and one which is making a unique contribution to the field of education is the cooperative extension work in agriculture and home economics.

Since the Smith-Lever Act sponsoring this work was not passed until 1914, and since the first work of this type, done partly with Government, partly private support, was begun only in 1911, the period covered by this decennium report is almost identical with that of the development of this work, and, therefore, further allusion to time involved will not be necessary.

THE FIELD OF HOME ECONOMICS EXTENSION AND ITS OBJECTIVES

The possible scope of the home economics extension program of work is as broad as the field of home making. For the farm women, in addition to the home economics phases of food, clothing, and shelter, it may include productive activities such as gardening, poultry, and dairying. In the urban centers besides food, clothing, and shelter, it may include supervised playgrounds, sanitary milk supply, municipal market, etc.

The subject matter used by extension agents is the latest recommendation of research laboratories, and the methods of teaching are based upon the best available data on psychology and teaching methods, since the effort of the agent in the county is constantly augmented by State and Federal staff, thus maintaining an up-to-

date and high quality of subject matter content and methods of teaching.

The purpose of home demonstration work is to analyze with local people the scope of home making; the major problems connected with their local responsibilities; and to assist them, through self activity of adults and juniors, to solve the immediate problems as a means of better home life in the country.

Home economics extension work is a continual challenge to the efficiency of the educator trained in home economics. Three factors are outstandingly worthy of consideration in this regard—

A. In a single adult group of some 25 women, met together in common realization of need for instruction (such as food selection), may be representatives of every status of social, economic, and educational standard and experience. In addition, the home demonstration agent has the responsibility of developing junior club work in the county, and it must be recognized that no fear of not securing school credits makes these women, or boys and girls attend, or continue to attend, the meetings and participate in the program of work.

B. In addition to interesting this cosmopolitan group, the extension teacher must face the fact that there is no precedent of a program of work (such as the resident teacher finds in an outlined course of study), and that the program must be made to fit the needs of the group concerned, based upon the past knowledge and experiences of the individuals of the group, and is affected by immediately prevailing economic and social condition.

Hence, the extension teacher must plan a program which meets the fundamental needs of the majority of the cosmopolitan group, and must make it sufficiently worth while so that home makers, with the full day's schedule which the busy housewife, particularly the farm woman, always finds awaiting her, will come to the place of meeting to gain information which will be helpful in her daily responsibilities of home making.

C. Another factor for serious consideration is that in dealing with the adult in the extension program, the agent meets the difficulty of fixed habits of thought and action, and the difficulty of overcoming these to improve daily practices and habits of thought.

Thus it will be seen that the extension teacher faces simultaneously the fourfold responsibility of planning a program of work, securing the interest and participation of local people, organizing groups, and doing extension teaching which will maintain sustained attention by sheer worth of the service rendered, with no responsibility on the part of the local people to participate or to continue participating for even a minimum of time in the program of work under way.

If education is "preparation for life to-day as well as for the future," home economics extension work is preeminently a contribution to the field of education, since it not only prepares for life but makes that contribution not at any particular age period, but continuously from the period of personal care of the infant through to adult life, with its managerial responsibilities, on through old age, when again the personal equation looms large.

It makes its contribution not as abstract theories based upon the desire for a broad general fund of information, but to meet specific, immediate, and recognized needs in the responsibility of homemaking.

It does not teach theoretical principles of a general nature which may later on be used with such adjustments as changing conditions may make necessary, but it must meet the test of contributing a solution of an actual immediate problem which already exists in a large number of homes, for which reason the project was included in the program of work.

METHODS OF TEACHING

Extension teaching is preeminently the project method of teaching, its objective being new practices or to improve those already in use. In extension work the project method of teaching is vitalized by the fact that the very reason for this type of educational work is that problems have already been realized and defined as such, in the program of work which the local people plan.

The extension teacher analyzes the problem into its various parts, determines which jobs require manipulation activities and which management ability, which require technical knowledge and which operative skill, and what related information is essential that the homemaker may efficiently work out the problem.

The basic principle of extension educati[illegible]me or community demonstration, the demonstration bei[illegible]on by one or more local women as a means of proving the practical application to local conditions of the scientific findings of the research laboratories. These local women, known as home demonstrators, undertake the demonstration and agree to follow the instructions of the home demonstration agent, make careful comparison with practices in use previously, keep accurate records of what is done and of results secured, and, then, for the benefit of the entire community, make public (usually at meetings for that purpose) the results secured. A number of demonstrations are usually carried on in relation to any one phase of the work so as to allow for all factors of variation which might tend to influence results secured.

It will thus be seen that the scope of extension work is as far-reaching as the field of farm or city home making and community

development. That group of persons reached may include every status of age, nationality, standards, ideals, and experience, and every stage of social, economic, and educational development.

Since this phase of education is still so young it is difficult to measure the results obtained, but even these few years would indicate that its contribution to the field of education includes the following:

1. *Methods of adult teaching.*—Perhaps the largest contribution of extension work to the general field of education will be in its contribution to methods of teaching adults, particularly those of the nonprofessional group. To date, only a beginning has been made in this field, but extension workers are studying the instincts, emotions, habits, and other characteristics of the farm family from youth through old age, and in the varying groups which social, economic, and educational conditions make possible in a cosmopolitan group represented in the communities of a given county. They are analyzing the mental group units represented, and the relative proportions of those who are of the reasoning type of mind and those who are purely imitative, as a basis for determining to what extent and for what groups instruction in improved practices must be the only basis used, and to what extent principles may be added to the instruction given. They are analyzing the various devices for extension teaching, such as publications, exhibits, the press, window displays, slogans, moving pictures, models, charts, pageants, and the like, and the comparative effectiveness of the different means of contact with the local people, such as the home visit, community-wide meeting, and county-wide meeting.

2. *Extends student period throughout life.*—Through this system of extension teaching, the boy and girl join in solving community and farm home problems, and once they are participators in such an endeavor, naturally and logically they and their parents continue their interest in study by means of the extension program of work throughout all their years, the extension agent adapting the form of presentation and the selection of facts to the mental abilities of the group, but each and all, adult and junior alike, continue to aid in the solution of problems common to the majority of the farms and homes of the community.

3. *Renews mental growth.*—Through its appeal to adults by arousing interest in recent developments in subject matter and methods affecting the home, home economics extension work makes an educational contribution through stimulating mental effort on the part of adults long out of school, thereby definitely renewing mental growth.

4. *Prolongs school attendance years for boys and girls.*—Through the fact that the extension agent creates in boys and girls a whole-

some interest in knowledge of facts regarding agriculture and home economics, many boys and girls have been led to desire to secure a college education. In many States agents have not only cultivated and encouraged this attitude, but have frequently provided training by means of which boys and girls have found it possible to make and save sufficient money during high-school years to finance themselves throughout the college period.

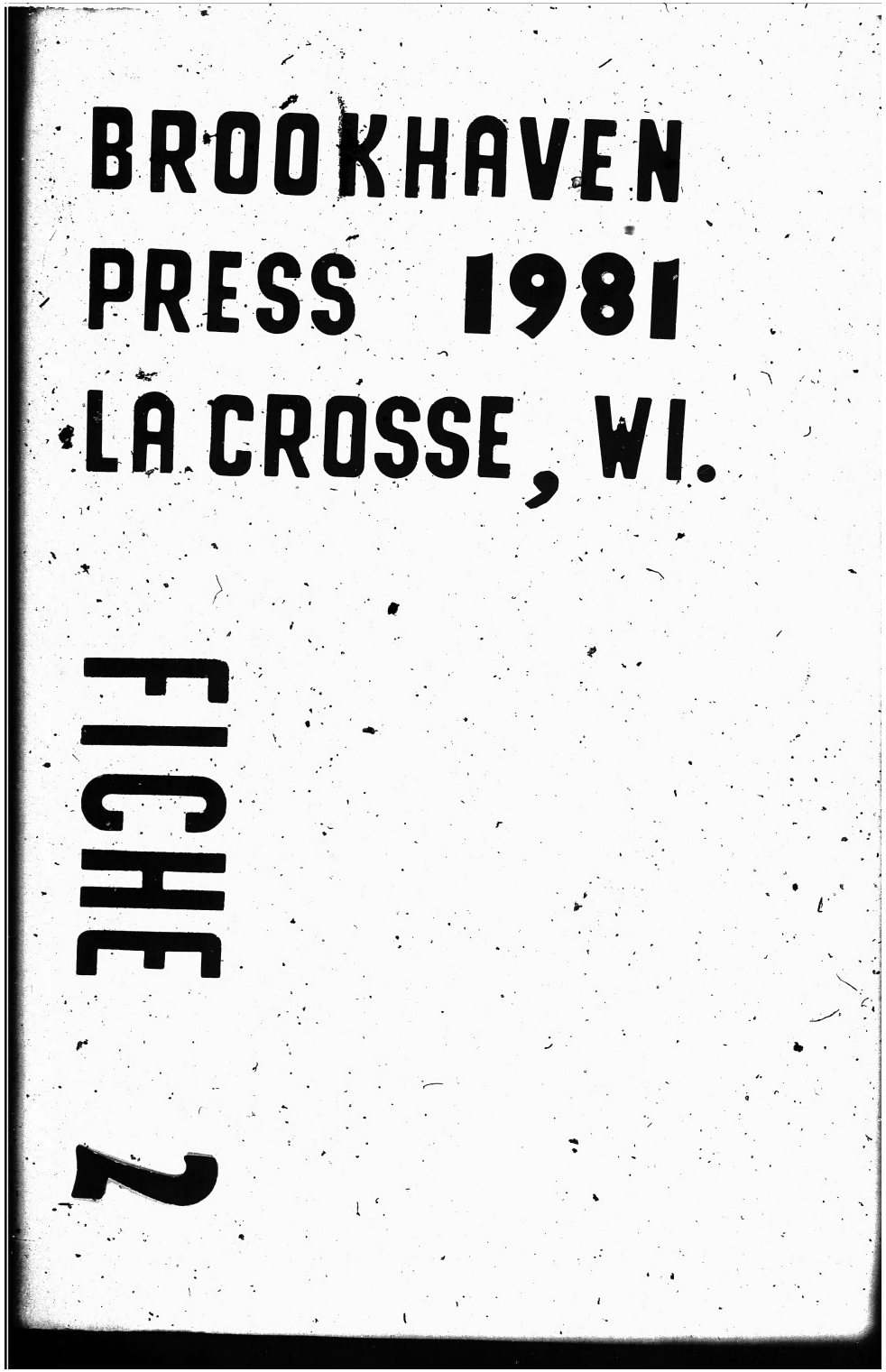
5. *Stimulates research activities.*—Because of their application of research findings to the field of actual conditions, extension workers are continuously realizing the need of more actual data to back their theories. They also indicate the need of data relative to fields as yet untouched by research workers. In addition they have suggested to research workers that close contact with the field indicates that certain problems being worked upon by research workers do not seem to be as vital to the general weal as had been supposed by directing research work. By this means extension workers have aided in directing research work into fields of most immediately helpful service.

6. *Puts final test on research findings.*—Through the fact that the extension agent works with actual home conditions, which represent such variations from the ideal as may be found in a cross section of American life in any county of any State, he has rare opportunity for testing the practicability of research findings, to indicate whether they are adaptable to such modification in application as the average community would require. Thus the extension agent can aid research workers through verifying effectiveness of results, or suggest the weakness in data available, and further work which may be desirable to make the data of greater usefulness. In addition, it has vitalized subject matter findings through reducing them to their simple and most fundamental units and translating these in terms of simple practices.

7. Through the fact that home economics extension work translates science into phraseology within the comprehension of the laity, and, in addition, assists people so to apply science that results secured are recognized by them as the direct result of scientific procedure, this type of educational work is engendering in the consciousness of the masses of the people a wholesome regard and belief in the whole field of scientific endeavor.

8. *Parents become interested in junior application of knowledge.*—Through the fact that the extension program of work is participated in by parents and juniors alike, there is double incentive to the juniors to enthusiastically carry into practice and achieve in a large degree of success the purposes of boys' and girls' club work. The unified family interest also makes for a greater degree of interest

U. S. OFFICE OF EDUCATION
BULLETIN, 1920-1930
1925
Bulletin No. 29



and more greatly sustained interest on the part of parents in improving their own standards and practices.

9. *Develops public opinion in favor of home economics and agriculture in the public-school curriculum.*—Through the fact that extension agents are teaching not only through direct contact with groups but in a large measure are giving information and instruction through the indirect medium of educational exhibits, press articles, pageants, window displays, public lectures, nutrition clinics, posters, and other means of contact with the general public, public opinion is constantly being built up in favor of home economics and the extension agent is constantly and consciously endeavoring so to mold opinion toward this end that in many counties it has culminated in securing home economics courses in the local schools, county public health nurses, dental clinics, and the like.

10. *It makes a sociological contribution.*—The basic principle of home economics extension work is the home demonstration wherein a local woman, under supervision of the extension agent, carries on certain recommended practices, compares them with methods in use previously, keeps careful record of results, and makes public this data for the benefit of the community. It brings people together on the basis of common problems and capitalizes this united interest, teaching them how to work and to recreate together. It fosters definite standards and ideals for a cultural and efficient home life, and indicates how a large proportion of this may be secured regardless of the amount of the family income. These, together with the policy of developing local initiative and utilizing and developing leadership among the people of the countryside, and the constant endeavor to raise the standards of personal, family, and community relationships and responsibilities, are sociological contributions.

Thus it will be seen that home economics extension work, though still in its infancy, is making a fundamental contribution to the present field of education, and that in the future it will undoubtedly render a still greater service to home economics education. It will also aid in determining general fundamental principles of methods of teaching which may be applied to any field of educational endeavor.

Chapter XIII

SHORT COURSES IN HOME ECONOMICS

By. JULIA L. HUBD,

Director, Noncollegiate Home Economics, Iowa State College

Many of the land-grant colleges are now offering, or have offered in the past, short courses or noncollegiate courses in home economics for those who do not care to spend four years in college, or who are unable to meet college requirements. Nineteen States are now offering such courses, and five States have only very recently discontinued the work. A survey of the field of these courses shows a great variety of aims, types of courses, length of courses, etc. The following material has been assembled from letters and questionnaires sent to the land-grant colleges.

One of the first short courses to be offered was at the school of agriculture in Minnesota, where the course was started in 1888. This school was established for those students who had not had a high-school education. This course trains primarily for home making and is a three-year course of six months each year. Cornell University first offered a short course in home economics of three months' duration in 1906 "to make better home makers and to give instruction to persons who could not avail themselves of a four-year college course." Several other colleges started such courses in the few years following.

These short courses seem to divide themselves into two general classes, first, "home makers' short courses" or "farmers' wives weeks" of one week's duration, usually held at the same time as the "farmers' week," and second, noncollegiate or regular short courses. These latter courses may be distinguished from the former in that the time of instruction covers a longer period, and a regular program of laboratory and classroom subjects is arranged. They are thus complete courses offered for a stated length of time, with regular class work, rather than a series of addresses or demonstrations.

Most of these courses are given by the regular home economics faculties of the various colleges. Pennsylvania State College has offered for the past three or four years "special courses open to anyone desiring foods and clothing work," and these classes have been taught by student teachers under the supervision of the teacher

in charge of the practice teaching. The work below college grade in the State College of Washington has been organized as follows: "The work in domestic science and art, in agriculture and in mechanics art, also work in business and secretarial science training, have been put under one head and are known as the department of elementary science." For the most part this department has its own organization and teachers. Some of the college departments also contribute courses. The noncollegiate work in Colorado and Minnesota is offered in separate schools for that purpose.

The entrance requirements for the short courses, however, differ in the various colleges. The most common one is that the applicant shall have completed the eighth grade. In Purdue University the eight weeks' course for housekeepers is open to any woman over 18 years of age who has had a good common-school education. The Utah Agricultural College requires that the applicant be a high-school graduate, or 18 years of age, while Missouri gives the age limit as 16 years. The length of courses varies from 4 weeks to 4 years of 6 months each.

The subjects offered in these courses usually contain a larger proportion of technical work and less academic work. In most cases credit is not accepted toward the regular college course. At the Pennsylvania State College the courses offered are "all home makers' courses and aim to give such practical information and experience as shall enable the home maker to plan, select, prepare, and serve such foods as shall best be suited to her family needs and to their income, and to plan, select, make, or renovate and care intelligently for the clothing and household furnishings for the average family of small means." The Kansas State Agricultural College gives a 15 weeks' course, including the following subjects: Cookery, sewing, housewifery, hygiene, design in home and clothing, and floriculture. North Dakota offers a home makers' course which continues through two six-month periods, opening about the middle of October and continuing to the latter part of March.

This enables the girls to be at home early enough for the spring work and also to enter after the fall work is finished. This is a purely vocational home makers' course. It contains all of the home-making subjects, a course in English and general science, and time for music if any of the girls desire this. The course contains cookery, foods, dietetics and meal planning and serving, feeding of children and invalids, sewing, textiles, making of household linens, making of children's garments, fall and spring millinery, home art, home nursing, home gardening, poultry raising, child care, household management, house planning, etc.

The entrance requirements are very liberal, since any girl who has finished the sixth grade may be admitted. This course seems to

meet a very great need in North Dakota. Another course is offered there, also, for a period of 11 weeks, known as the short course. This is very limited in the work which it accomplishes, being mainly a course in cooking, sewing, home art, millinery, and poultry raising.

Montana State College offered a special course during the year 1922–23 for the wives of the Veterans' Bureau men, at the request of the agent of the Federal Board for Vocational Education. This course included work in both foods and clothing. Iowa State College now offers short unit courses of 12 weeks each for home makers, and wives of Federal board students have attended these courses in quite large numbers, as well as women living in the vicinity of the college. It is planned to increase the number of these courses so that one year's work may be taken if desired. These courses are for women who wish to know more about home making and can not spend the four years for such work. No specified number of courses need be taken, and there are no prerequisites. The courses include principles of cookery, meal service, marketing, nutrition and dietetics, household management, care of the house, house planning and furnishing, applied and costume design, garment construction, millinery, literature of the home, recreation for the home, and gardening.

One interesting feature in connection with the short courses held at the same time as the farmers' weeks is the increasing number of short courses for boys and girls who are members of State clubs. Rhode Island gives such a course "to strengthen boys' and girls' club work in the State." Connecticut Agricultural College gives as its aim "to strengthen interest in the college and to inspire junior club members to continue their education." This is truly a worthy aim. Those attending the short course must be club members and must have completed successfully some club activity. Iowa State College has had very successful short courses for club boys and girls during farmers' week, as have Arkansas, Minnesota, etc. The trend of the times seems to indicate that the work among the boys and girls is the most important and vital in these short courses.

The University of Tennessee has offered since 1918 a short course for rural women, home demonstration agents, and all other women who may be interested. One week of intensive work is especially adapted to the problems of rural women. Home demonstration agents and women possessing qualities of leadership, particularly those having had experience in teaching and handling farm home problems, have a three weeks' course in addition. The topics discussed vary from year to year. The joint course, given to all, for the year 1923 included the following:

Nutrition: Lectures on selection of food and how to make out well-balanced diets for the average family, with a special attention to the food for children.

Textiles and clothing: Use of commercial patterns. Selection and buying of clothing. Use of sewing machines.

Demonstration cookery: Cooking of vegetables and meats; canning and bread making.

Reading for the family: Choice of books for the children and adults in the home.

The three weeks' course which followed the above course included laboratory work in foods, construction work in clothing, and a methods course dealing with the history and aims of extension work, methods of creating interest among girls and women, organization methods, etc. All this work is carried on in cooperation with the extension department and is for the purpose of interesting farm women, and helping home demonstration agents and those expecting to take up that line of work. It carries the usual homemakers' week one step further.

The future policies and problems in connection with the noncollegiate courses seem to center around one fact. The need for the longer courses, such as the two-year or four-year courses for the younger students who are not high-school graduates, seems to be passing. They have undoubtedly filled a very vital need and have done so successfully, but other factors are influencing the demand and more or less supplanting these courses. As mentioned in the foregoing, five States have recently given up their short courses, and four other States, while still continuing their shorter courses and the weeks' courses during Farmers' Week, have given up the longer courses. The main problem confronting those colleges that still plan to continue the work seems to center principally on methods of increasing attendance. The University of Minnesota gives as its problem "the giving to pupils, in such a limited time, the fundamentals of secondary academic work plus training for homemaking, and also enough vocational work so that they may earn money, upon graduation, in other than purely domestic work." This latter problem has presented itself at other schools. Because of higher educational standards, girls completing the noncollegiate courses are no longer able to obtain teaching positions and other positions are not always easily found. Louise Stanley says:

I expect the demand to decrease as vocational home economics in the high schools is developed in such a way as to supply the needs of these girls. Of course, there may always be a local demand for the older women, but if courses are developed to meet the needs of these older women they must be given for a shorter length of time.

Colorado finds that "the need for this course is growing less as the rural schools consolidate and offer courses in Smith-Hughes home economics." Idaho found that there was not a sufficiently large number enrolled at any time to warrant the time and expense.

The vocational high schools in that State seem to be meeting the need. The development of extension work, as well as that of the high schools, has caused West Virginia to discontinue the short courses, as may soon be the case in Indiana. "Home economics is so generally taught throughout the high schools and in all the colleges of Kansas that the short course seems in very small demand." Thus it would seem that this problem is quite general throughout the country. Among the States giving no short courses at the present time are Michigan, Illinois, Wisconsin, California, Wyoming, Kentucky, and Vermont. There is no doubt that the improved facilities for high-school education, and the higher standards of education, at the present time, directly affect attendance in these courses. In Iowa the high-school attendance in 1922 was 88,642, as against 62,589 in 1917. In 1908 there were 4,778 high-school graduates; in 1918 there were 9,786.

However, there will still be a future for some forms of short courses—probably the most needed are short unit courses for the homemakers of to-day. The more extensive education of the homemakers of to-morrow should arouse in their mothers a desire for better training for the present. That feeling is being manifested in many places. Other possible courses are for community leaders in extension work, and also the week's courses for boys and girls in club work, the various courses being planned to meet local needs.

INDEX

○