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REVIEW AND SYNTHESIS OF RESEARCH IN HOME ECONOMICS EDUCATION.

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PROFESSIONAL MAGAZINES, RESEARCH REVIEWS, AND 500 THESES AND DISSERTATIONS WERE CONSIDERED IN SELECTING 159 RESEARCH STUDIES FOR REVIEW. STUDIES CONCERNED WITH TEACHER EDUCATION WERE INCLUDED BUT ADULT EDUCATION WAS EXCLUDED. THE PERIOD FROM 1959 TO 1966 IS COVERED. TOPICS ARE (1) PHILOSOPHY AND OBJECTIVES, (2) MANPOWER NEEDS AND EMPLOYMENT OPPORTUNITIES, (3) EDUCATIONAL PROGRAMS, (4) INSTRUCTIONAL MATERIALS AND DEVICES, (5) LEARNING PROCESSES AND TEACHING MATERIALS, (6) STUDENT PERSONNEL SERVICES, (7) FACILITIES AND EQUIPMENT, (8) TEACHER EDUCATION, (9) ADMINISTRATION AND SUPERVISION, (10) EVALUATION, AND (11) RESEARCH. THE AUTHORS CONCLUDED THAT PROGRESS HAS BEEN MADE IN COLLECTING AND ANALYZING DATA RELATING TO IMPORTANT PROBLEMS, BUT RESOURCES SHOULD BE USED TO BETTER ADVANTAGE. MANY THESES HAVE ONLY LOCAL IMPLICATIONS. STATISTICAL CONSULTANTS AND RESEARCHERS IN OTHER AREAS OF VOCATIONAL EDUCATION SHOULD BE UTILIZED. THEORIES SHOULD BE REEXAMINED IN LIGHT OF THE RESEARCH FINDINGS IN EDUCATION, PSYCHOLOGY, AND SOCIOLOGY. THERE IS A NEED FOR GREATER CREATIVITY, LEADING TO EXPLORATORY STUDIES AS THE FIRST STEP IN PROBLEM SOLVING. (MS)

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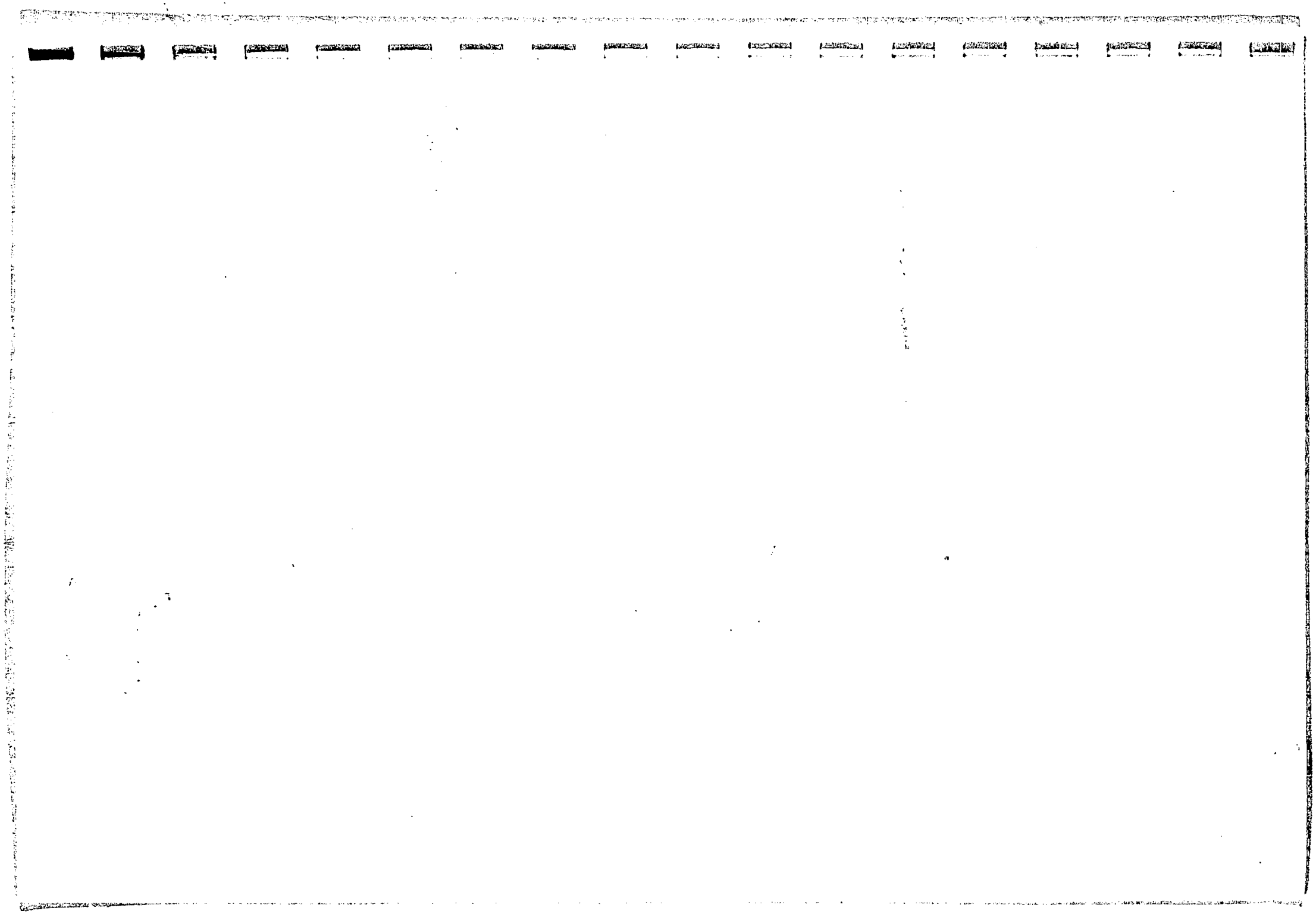

REVIEW AND SYNTHESIS OF RESEARCH IN HOME ECONOMICS EDUCATION

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INTRODUCTION

In keeping with The Center's responsibility for stimulating and facilitating research in vocational and technical education and its commitments to information retrieval and dissemination, this Review and Synthesis of Research in Home Economics Education has been developed. The stimulus for this paper evolved from the recognition of need for establishing a base or "benchmark" for current research efforts and for the national information retrieval and dissemination system being developed by The Center and linked to the Educational Research Information Center in the U.S. Office of Education.

This review paper should aid researchers and practitioners in assessing the current state of the art in research for the field of home economics education. Further, it should assist in identifying voids in our present research framework and help "sharpen" future studies, both in terms of their substantive focus and methodological approaches. It is logical to assume that this compact review should also assist practitioners in accelerating the applications of research findings to current practice in vocational and technical education programs.

It is recognized that since the ERIC network and its information retrieval and dissemination system was not yet operative when this paper was prepared, the review is subject to gaps and that, in the main, the paper does not reflect the rapidly evolving findings

generated by funds available through Section 4(c) of PL 88-210. Admittedly, the authors had problems in securing all available material, but nevertheless, in our judgment, they have done a splendid job of "pulling together" the significant research in the area.

This paper is one of seven published by The Center dealing with research in a substantive area of vocational and technical education. Other research review papers include: Agricultural Education; Business and Office Education; Distributive Education; Industrial Arts Education; Technical Education; Trade and Industrial Education.

Through The Center and the ERIC Clearinghouse for Vocational and Technical Education, it is anticipated that in the immediate future, other research review and synthesis papers will be developed to assist the profession in assessing an updated "state of the art" and of the potential impact of research on educational practice.

We are indebted to Hester Chadderdon and Alyce M. Fanslow for their scholarship and efforts in providing the profession with this new benchmark and perspective on research in home economics education. Recognition should be given to Dr. Sara Blackwell, Director, Teacher Education, College of Home Economics, Cornell University, Ithaca, New York, for her critical review and helpful suggestions for refining the manuscript prior to publication. Acknowledgment is also due Dr. Virgil E. Christensen, of The Center staff, for coordinating the work of the several authors.

Final acknowledgment is given to Dr. Sylvia L. Lee, Specialist in Home Economics Education, at The Center, for her review and assistance in the development of this publication.

We solicit the suggestions and comments of the profession for improving these publications.

Robert E. Taylor
Director

PREFACE

This review of research covers primarily the period between 1959 and 1966; many of the studies, however, completed late in 1965 and 1966, were not available by interlibrary loan or microfilm. Approximately 500 titles of theses and dissertations were considered during the initial selection stage. If the studies appeared to be related to the topics under consideration, the abstracts or theses were examined before the final selection was made. Professional magazines and reviews of literature were other sources used to obtain a reasonably complete coverage.

Only studies at the college level concerned with teacher education were included. Those in the area of adult education were excluded. In some areas, notably curriculum, the large number of theses necessitated the use of another basis for selection. Since many involved only a local sample, making the findings of limited usefulness, those sampling a broader population were given preference. The number relating to wage-earning, however, was small and, hence, some with local sampling were included. These can be useful in suggesting types of data needed and techniques of data collection even though the findings are limited in scope.

The authors want to express their appreciation of the assistance of Carolyn Kundel and Margaret E. Arcus in obtaining reports of studies and checking the bibliography in addition to other means of making it

possible to complete the project in the limited time available. Also, acknowledgment is given to Dr. Marguerite Scruggs for writing the section on Manpower Needs and Employment Opportunities.

Hester Chadderdon

Alyce M. Fanslow

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PHILOSOPHY AND OBJECTIVES

Traditionally, philosophies of education and, hence, the development of curriculum objectives have been formulated by "deduction" from general philosophic positions. Relatively few formal studies of this nature have been carried on previous to or since 1960. The most basic statement of the philosophy and objectives of the home economics profession is that found in the report by the Philosophy and Objectives Committee of the American Home Economics Association (1959). The list of 12 competencies fundamental to effective family life has important implications for the secondary home economics program.

McConnell (1965) explored the implications for home economics education at the secondary level of these four philosophies: idealism, essentialism, pragmatism, and humanism. Antz, Bagley, Dewey, and Hutchins were selected to represent each position and their writings were summarized to represent each philosophy. The nature of the home economics program within each was then interpreted. While Hutchins' position would exclude home economics, the other three allow for this area in the curriculum. McConnell believes, however, that Dewey's position gives "greater breadth to home economics, comes closer to the ideas expressed by home economists, and appears to permit greater flexibility for future development."

While examination of general philosophic positions has contributed to the determination of objectives to be attained, the

social, economic, and technical trends of the time have also been influential. Hostetler (1961) sought to define these trends which home economics teachers and experts in the field recognize and agree upon as promoting curriculum change in the secondary home economics program. She obtained responses to a questionnaire containing 34 statements relating to trends from a random sample of 105 junior and senior high school home economics teachers in Indiana and from 88 head teacher educators in home economics. While both groups agreed upon the importance of 18 of the 34, the highest frequency of agreement between the two groups concerned the importance of population, income and credit, and value trends on curriculum change; less agreement was evident on those related to social structure and education. In general, the teacher educators appeared to consider the social, economic, and technical trends more important for planning the future home economics curriculum than did the teachers and to exhibit greater willingness to make the appropriate curriculum changes warranted by them than were the teachers. The latter tended to accept the status quo.

The changing role of women and its implications for homemaking education was examined by Fisher (1963). Some of the changes foreseen are: an increased emphasis on management; a greater concern for educating the individual for self-understanding and for family membership; a lessening, but not the complete abandonment, of manipulative skills; and education for assuming the dual role of homemaker and wage-earner.

Recognizing that both philosophies of education and the conditions of the period influence the formulation of objectives, Simpson

(1964) summarized the major objectives of home economics education on the secondary level:

1. to prepare young people, particularly young women, for making a home. . . .
2. to prepare young people who can profit from such training for occupations which use home economics knowledges and skills.
3. to prepare them for combining the dual role of homemaker-employed person with success and satisfaction.

For many years it was questioned that home economics at the secondary level should assume any responsibility for preparing students for wage-earning occupations. With the passage of the Vocational Education Act of 1963, however, this objective is becoming accepted as one aspect of the secondary home economics program. Some reasons for the incorporation of employment education into the program were listed by Simpson (1964):

1. A large number of women work outside the home; thus, we have the responsibility to help prepare them for the other half of their dual roles.
2. There are fewer positions available for the unskilled; home economics has the potential for teaching wage-earning skills.
3. A large percentage of unmotivated young people drop out of school; evidence suggests that they are more likely to remain in school when education for employment is offered. Home economics can contribute to this program.
4. The number of service occupations has greatly increased and many have a relationship to home economics.
5. Too few high school students are receiving vocational education; home economics has a contribution to make in education for employment.

The acceptance of employment education as an objective of the secondary home economics program was studied by Blunier (1963). In a survey of state supervisors, she found the majority agreed that education for employment is an emerging area of emphasis in the secondary

home economics curriculum and that preparation for wage earning should be included in it. This belief is being implemented in many states; 49 per cent of all the state supervisors returning questionnaires reported some programs concerned with employment education. Two years later, 103 city home economics supervisors were surveyed by Whitmarsh (1963). She found a somewhat more favorable attitude toward a wage-earning program. Only seven per cent believed that this emphasis would interfere with education for homemaking and 18 per cent were undecided. Brittain (1965) used references on vocational education, women and the world of work, home economics education, and child care to formulate a philosophy of vocational education as it relates to gainful employment in home economics.

The time lag between educational theory and education practice is not a new concern of educators. One long-term study has been completed which has as its purpose the discovery of the discrepancies between the beliefs and actions of home economics teachers. Johnson, Lowe, Smith, and Stringer (1961) first sought to identify the educational beliefs which home economics education authorities accepted as important. A questionnaire containing 37 beliefs was mailed to a national sample of 76 supervisors and heads of teacher education departments; all but three responded. Analysis of the data indicated that 30 of the beliefs were considered very important by at least 75 per cent of these home economics educators. The 30 beliefs were grouped into five categories:

1. teacher objectives and content of home economics courses at the high school level
2. methods of teaching high school classes
3. evaluation in the high school program
4. pupil participation in all that goes on in the home economics program
5. extra-class responsibilities of the teacher and the physical facilities of the home economics department

Later, Golwin (1961) revised the questionnaire and sent it to a sample of home economics teachers in North Carolina to learn which beliefs they accepted and which they had difficulty in applying in their teaching. She concluded that the home economics teachers in North Carolina largely accepted the concepts that leading home economics educators thought important. Examples of those which they had difficulty in applying are: teacher-pupil planning, program interpretation by teacher and pupils within the school community, and teaching pupils to inductively arrive at their own generalizations and use them in problem solving.

In a third aspect of the study, Clawson and Johnson (1965) investigated the extent to which home economics teachers applied three of the beliefs identified as important by both groups. These were concerned with pupil development, understanding of self and others, and teaching for carry-over. Data were collected on a random sample of 18 teachers within a 30-mile radius of Greensboro, North Carolina. Teachers were found to have both strengths and weaknesses in relation to each of the three beliefs. Teachers seemed to provide classroom atmospheres where the pupils were at ease and interested in class activity; to encourage pupils to apply knowledge learned in class to life outside the classroom; and to help students improve their self-understanding. They appeared to need help especially in learning what is meant by a good discussion; in finding ways to challenge pupils of all levels of ability; and to provide experiences in all areas of home economics that are meaningful to pupils and to help them see home applications.

MANPOWER NEEDS AND EMPLOYMENT OPPORTUNITIES

A review of the literature revealed a limited number of studies dealing with manpower needs and employment opportunities in home-economics-related occupations. The few reports that could be obtained include two investigations of general manpower needs for a state and surveys of potential employment opportunities utilizing such sources of information as employers, employment security agencies, and home economics teachers.

Two examples of state-wide studies of manpower needs, present and projected, are those reported by Jakubauskas (1966) and Bognanno and Hagen (1966). Each analyzed the labor force distribution for Iowa and some of their findings have implications for home economists. After briefly describing the population and labor force growth from 1940 to 1960, Jakubauskas (1966) discussed trends for the United States and for Iowa in manpower needs by industry, by major occupational group, and by specific occupation. He found that in Iowa there is a trend in available jobs away from the less skilled toward the more highly skilled, which means a trend toward jobs requiring more education. An annual increase of 600 new jobs in personal services was predicted for the state to 1980; also, that white-collar jobs would comprise about 40 per cent of total employment in the state in 1970 and about 56 per cent in 1980. Some of the jobs commonly held by women he identified as contributing to these increases were: (1) private household jobs will increase substantially, (2) employment for cooks and hospital attendants will nearly triple, and (3) need for cleaning women, counter service personnel, and assemblers in manufacturing will double.

In projecting employment changes in Iowa to 1970, Bognanno and Hagen (1966) see the fastest growing area of employment opportunity for men in Iowa as professional, technical, and kindred workers. The fastest growing occupational category predicted for women is that of service workers, which they anticipate will increase nearly 60 per cent between 1960 and 1970.

A progress report was available for a survey of existing or anticipated jobs related to homemaking being made by Swope (1964-65). Data from a random sample of homemakers in one Illinois community had been analyzed and were also being obtained from samples of homemakers in two additional towns. In the one community, the most likely increase in jobs relating to homemaking for trained persons would be regular and special house cleaning, child care, and laundry work. Teenage girls would be accepted for these jobs and the expected rate of pay would be highest for house cleaning and laundry work.

Bentley (1964-65) described several techniques employed in South Carolina to obtain information useful in curriculum planning and included a copy of questionnaires which were used to obtain the reactions of young persons to home-economics-related jobs and to determine potential homemaker service areas.

In an investigation of employment opportunities for women in service occupations in Idaho, Latham (1965) administered questionnaires to managers of Employment Security Agencies in 25 cities and to 70 home economics teachers. The former estimated the number of job requests they had per month for each of nine groups of home-economics-related occupations. The most frequently reported request was for supervised

food service workers, an average of 7.4 per month for the state as a whole; the demands for homemaker's assistants and for child day-care workers were almost as great--7.5 and 7.0 per month, respectively. No requests had been received for management aide in low-cost housing or family dinner service specialist.

The managers ranked these service occupations in order to importance to the community which their agency served. When the ranks assigned were weighted, it was found that the three ranking highest were: supervised food service worker, companion to the elderly, and hotel-motel housekeeping aide. They were also asked whether they would encourage persons on their employment lists to participate if training programs were available in any of the nine occupations. All but three of the 25 responded positively. Child day-care worker and homemaker's assistant were most frequently judged by the teachers to be the occupations for which training could be given at the high school level. Some physical facilities for wage-earning programs were available in all but two of the 25 communities.

The food service industry in Santa Monica, California, was investigated by Rossi (1966). She found four specific occupations that were available to secondary school students in which knowledge and skills of home economics could be applied and for which there was most demand for workers. The four were workers in food preparation, waitresses, food servers, and hostess-cashiers. Managers of commercial food establishments primarily preparing or serving food for profit were interviewed. When asked about employment of student trainees, 72 per cent expressed interest in hiring such persons and estimated that 38 such jobs would be available per year. The majority preferred that employees be at least 16 years of age.

The Southern Regional Committee for Family Life (1965) collected data in Kentucky, North Carolina, Virginia, and Tennessee relative to vocational goals of rural youth. The sample included 1,139 randomly selected from a population with specified characteristics and stratified into 48 sub-groups based on sex, membership in the specified youth organizations, level of living, place of residence, family size, and area of the state. All participants were enrolled in the ninth or tenth grade of county school systems.

Some of the findings are of particular interest to home economists. The higher the level of living of the family, the longer the length of schooling planned by students and by parents for them; fewer girls expected than wanted to enter professions and more girls expected than wanted to be full-time homemakers; non-members of youth organizations valued education more highly than did members. Based on scores on the Kuder Vocational Preference Record, sex was the factor most often related to vocational interests.

Altman (1966) reported a study of general vocational capabilities that had two major purposes: to describe a domain of general vocational capabilities and suggest methodological improvements in the derivation of educational goals. The sample of 31 occupations and selected jobs within each occupational group included several related to home economics. After describing component tasks, task behaviors for each occupation were translated into multiple-choice test items. These were administered to 10,000 students from ninth grade through junior college in two school systems. Correlations of the scores revealed a domain of areas of vocational capabilities ranging along a

continuum from "hardware-to-people;" namely, mechanical, electrical, special, chemical-biological, symbolic, and people. Altman stated:

> The most important implication of the study was that there is a definable and well-structured domain of vocational capabilities which has not previously been well defined and which is not being systematically taught by our educational institutions. This domain is compatible with and intimately related to existing academic disciplines and specialized vocational training.

CURRICULUM DEVELOPMENT

More studies, both previous to as well as after 1960, have been carried on in this area than in any other. Many, however, have been limited to a small sample and will not be reviewed unless they represent a unique method of collecting or analyzing data.

Decisions relating to curriculum involve several considerations; hence, it is not surprising that the problem has been approached from more than one base. Pressures of society on the home; organization of knowledge; beliefs of educators and lay persons; responsibilities, beliefs, attitudes, and irterests of pupils; and wage-earning demands all have been used to obtain evidence of needs that should be met.

After examining the fact that our culture is increasingly urban rather than rural, Moore (1964) pointed out six pressures that impinge on families today: mobility, closeness of living with others, stress, rapid change, living with diversity, and the need for common values to lend stability to the individual and the nation. She also noted that mothers are increasingly employed outside the home, that fathers are assuming a greater role in homemaking activities than their fathers did, and that decisions are more frequently shared by all family members.

Because of the changes affecting families, the accumulation of new knowledge, and the need to improve articulation, the U.S. Office of Education took responsibility for analyzing the field of knowledge in home economics with the assistance of educators and subject-matter specialists. Mallory (1964) described the process used to define the structure and content in terms of basic concepts and generalizations in the five areas: Human Development and the Family, Home Management and Family Economics, Food and Nutrition, Housing and Textiles and Clothing. She also reported one example of how these concepts and broad generalizations are being used in the revision of one state program--New York.

The judgments of educators and lay persons are useful largely to determine the degree of readiness to accept new aspects or different emphases for programs. One of the current critical issues is that relating to the inclusion in programs at the secondary level of objectives concerned with wage earning.

Vossbrink (1966) examined the attitudes and beliefs of school administrators in Michigan with reference to programs designed for homemaking education and for wage earning. She drew a random sample of schools offering a homemaking program and classified them by size. Of the 150 selected, personnel from 109 participated in the study. The superintendents and principals agreed generally that the program designed for homemaking preparation was desirable in all four grade levels but more of them favored the ninth and 12th grades than other levels. They saw the subject as valuable for potential school dropouts as well as other girls but there was less agreement on courses for boys or courses in family living for senior boys and girls.

Although training for wage earning had not been instituted in many of the schools, there was general agreement that home economists had a contribution to make in such preparation.

One of the objectives of Ferguson's (1960) investigation was to determine the place seen by school administrators in Iowa for units relating to education for family living. More than 70 per cent of the randomly selected sample believed that all high school pupils, both boys and girls, should have instruction in this area regardless of their post-high school plans and that the 12th grade was the best time. There was less agreement regarding the desirability of making such instruction required, however. A majority of them thought that the social studies teacher should teach the aspect of Community Living, the home economics teacher the Child Development, and other teachers the Health of the Family. The proportions were lower for other aspects but Preparation for Marriage and Personal Problems were most commonly "assigned" to home economics and Housing and Economics of the Family to social studies. Some saw the need for the teachers in these two areas to share teaching particularly that relating to Preparation for Marriage, Economics of the Family, and Housing.

The beliefs of laywomen who were officers of community organizations, concerning the teaching of home economics to junior and senior high school pupils, reflected an outmoded concept of a homemaking program for girls. Perrice (1961) gathered data by questionnaire from 255 respondents in 25 states representative of the four regions. Half of the women queried were full-time, middle-aged, married homemakers with two children under 18 years of age living at home; 85 per cent had at least a high school education and all were active in church, civic, and PTA organizations.

All of the major areas of learning were approved for girls by at least 60 per cent but the most frequently selected area was clothing, textiles, and related arts, 80 per cent; planning, preparing, and serving food for the family was the second highest, 76 per cent, followed by family economics and housing, both 66 per cent. When asked which areas boys should be taught, the highest percentage, 61, placed family economics first, personnel and family relationships second, 59, and the area of housing, home furnishings, and household equipment was third. Only approximately one-fourth believed that boys needed to be taught about planning, preparing, and serving food, or clothing, textiles, and related arts. Developing a wholesome attitude toward sex was believed to be the most important learning to be taught boys and girls at home, 86 per cent.

Whitmarsh (1966) used the opinions of professionals and practioners in Illinois to determine the knowledge in child development and guidance needed by mothers and employees in occupations related to child care. An instrument containing 68 items of knowledge was constructed to probe the depth of understanding believed necessary for job performance as a day-care center assistant or as a mother. No statistically significant differences were found between the opinions of the practitioners and these professionals: child development specialists, day-care licensing representatives, and social workers. Mothers were judged to need different amounts of knowledge than persons employed in day-care centers. Whitmarsh recommended that the knowledges judged to be common be included in a core course and that those which are unique be included in separate, advanced courses.

Grade-level placement was investigated by Sigrest (1963) in relation to subject-matter content in the area of housing by obtaining the judgments of 100 Mississippi homemaking teachers concerning the grade level most appropriate for teaching the various aspects. A majority selected the following as appropriate for 11th- and 12th-grade students: financial and legal aspects; owning and renting; decorating, arrangement of furnishings and rooms; selection of household linens; wiring and lighting; cooling and heating; plumbing; selection of windows, doors, and floor coverings; and landscaping. Categories thought to be appropriate for ninth- and 10th-grade levels were factors involved in arrangement of furnishings and rooms and in decorating a house. Only one item was checked by 50 per cent or more of the respondents as being appropriate for the seventh- and eighth-grade level: the social and psychological development of the individual gained through physical care of the home.

To determine the needs for strengthening educational programs which prepare for the vocation of homemaking, Jordan and Loving (1966) obtained responses to a questionnaire from about eight per cent of the approximately 20,000 young women who had attended Virginia high schools in 1954-1955. More than 90 per cent felt that young women today need preparation for homemaking in addition to that provided in the parental home. Management was the content area in which the greatest need for help was indicated. Problems in the early years of marriage seemed to cluster in two areas: adjusting to new situations and adjusting to the roles and responsibilities of being a homemaker. Approximately three-fourths considered homemaking a full-time job comparable in dignity and status to employment outside the home. They found homemaking to

be intellectually stimulating. Homemaking practices reflected inadequacies in the consumption of citrus foods and milk, the greatest being the latter. Guidance of the growth and development of children appeared to be a responsibility shared by both parents.

A study of 270 young Iowa and Minnesota high school graduates between the ages of 18 and 21 support Inman's (1962) conclusion that young homemakers have not been adequately educated in the area of household equipment for their occupation of homemaking. Seventy-five per cent owned at least 10 household equipment items but their responses to a set of statements revealed a lack of knowledge about the selection, use, and care of the equipment. Parents, friends, and salesmen were the most commonly used sources of help when deciding upon a purchase. About one-fourth of the problems with equipment were associated with use and care of the range. Equipment generalizations were developed and sbumitted to curriculum specialists. Although many of the statements dealt with subject matter often included in the first course in household equipment at the university level, most of them believed the content suitable for the secondary school homemaking curriculum. Fifty per cent or more of the educators agreed on the grade placement of the content.

Lemmon (1964) approached the problem of what and where to teach aspects of housing by asking the opinions of 115 rural and urban homemakers, 20 home economics teachers in Colorado, and extension specialists in housing. Safety in the Home was the category most frequently judged to be very important but each of the other nine categories was believed to be very important or important by approximately 80 per cent of the group; cleaning, buying, and caring for furniture was the one

exception. In reply to the question of grade placement, the majority of the teachers said that these aspects of housing should be taught in junior and senior high school and to adults: safety, arranging furniture, beauty, storage, and lighting. The aspects believed most appropriate for upper high school and adult levels were: buying, renting, remodeling, and caring for furniture.

A large number of studies were found that are concerned with the attitudes, home responsibilities, interests, and beliefs of pupils and several have related these to such variables as grade level, sex, socio-economic status, employment of mother, and ethnic background. Some of these investigations are so extensive that they cannot be reported here in detail. Many, however, included only a few high schools or were not randomly drawn from a population and have such limited usefulness that they were not included in this review.

Grade Level

Grade level or age was one of the variables investigated in several studies. In the area of personal and family relations, the Texas study by Moore and Holtzman (1965) is outstanding in scope: Nielsen (1961) also sampled a state--Iowa.

In Texas, they found that as the students progressed through high school from grades nine to 12, their feelings of isolation decreased, their need for conformity lessened, they became less critical of the educational system, and they had fewer problems in peer relations. Responses to items from an inventory, Interests in Personal and Family Living, revealed that ninth- and 10th-grade pupils were particularly interested in the aspect of dating and the upper grades in items relating to marriage and being at ease in social situations. In Iowa

pupils in the eighth and 12th grades recognized more personal-social problems than those in other grades. Adams (1964) asked approximately 4,000 students 10 to 19 years of age to list their and their peer group's biggest problem. Boys more commonly reported problems related to school and finances whereas girls tended to report interpersonal and family problems.

One trend related to the area of child development was found in the Texas study; students became less authoritarian in their attitudes toward rearing children as they moved toward maturity. Those in the ninth and 10th grades were especially interested in learning more about toys and care of sick children as well as the development of children as a basis for baby sitting. None of the items on the interest inventory relating specifically to children was more frequently marked important by the 11th and 12th graders than by the younger pupils. Three investigations in Iowa analyzed the experiences and the problems recognized by junior high school pupils by grade: Bunz (1964), Ferguson (1964), and Jeske (1963). They found that the care of siblings increased, that baby sitting by girls was most common at the ninth-grade level, and that seventh graders were more concerned with the majority of the problems than those in the eighth or ninth grades.

Interests in housing and management were found to be high among juniors and seniors as compared with pupils in the two lower grades in Texas. The seven items of major interest to the older students related to the house and equipment and three to managing time and energy. When Schweiger (1966) studied the tasks assumed by junior high school pupils relating to housing, she found that more eighth- than seventh-grade girls participated in them but that the reverse was true for boys.

In relation to food and nutrition, 11 items were of major interest to Texas pupils in the first two grades in high school: how to select, prepare, and serve food and food fads. The selections of the upper classmen contained two in this area: the purchase of food and getting family members to eat wisely. Experiences with food varied to some extent by grade level among Iowa pupils. Mean's (1964) data indicated that grade level was consistently related to the experiences of purchasing food, preparing meals when the mother was not home, and preparing yeast breads and pies. Eighth graders more frequently than others prepared sack lunches and 10th graders prepared meals and certain individual dishes.

Money management was included in four studies in addition to the one in Texas: Bruner (1965), Dunsing (1960), Hurt (1962), and Powell and Gover (1962). Bruner found in two New York senior high schools that four aspects varied by grade: use of personal charge accounts, use of parental charge accounts, amounts of income, and money spent. In the Texas study, the more advanced pupils were particularly interested in four items in money management: investment, insurance, credit rating, and wise purchasing. In four senior high schools in San Francisco, the income of the older girls tended to rise from earnings outside the home, gifts, and allowances, and they less commonly were accompanied by mothers when shopping for clothes. Hurt's sample included girls enrolled in home economics classes in 39 states. She reported increases in money spent for clothing, books, contributions, car expenses; also, in freedom to decide how to use their money. Powell and Gover found in South Carolina that as the grade level rose, the amount of money received from jobs outside the home and the freedom to spend their money increased.

Sex

Since in the past relatively little attention has been given to discovering the needs of boys, it is surprising to find that in several studies sex differences have been explored. The Texas survey revealed that boys were on the whole more pessimistic about the world and more negative toward school experiences and that girls were more critical of their female peers. In Iowa, 12 of the 60 items used by Nielsen (1961) to discover problems were more frequently reported by girls than boys. They involved items in four categories: making friends, dating, going steady, engagement and marriage. Dunn (1960) investigated the marriage role expectations of older adolescents and discovered that girls more commonly had expectations classified as equalitarian. In contrast, no sex differences were revealed when Klotz (1963) surveyed 12th-grade students in urban areas of Iowa. Their judgments were similar regarding the importance of studying 68 items relating to marriage and family living. The clusters of items considered most important by both sexes were values and goals, selection of a marriage partner, child care, and maturity. Also, both sex groups in Texas were interested in the study of personality and interpersonal relations, but the girls were more interested than the boys in learning about home management and household skills. In a specialized sample to study ethnically diverse communities in Iowa, Brown (1964) found that in general girls were more concerned than the boys about dating, values and goals, self and marriage, children, and engagement.

In studies involving the area of child development, some differences were found between the sexes. Boys in Texas appear to hold more

authoritarian concepts concerning the discipline of children and to be less interested in studying child rearing. Iowa studies revealed that the differences between sexes were greater with respect to baby sitting than to care of young siblings. Girls also had contacts with more children, more frequently and for longer periods of time. A large proportion of both had some informal contacts every day and were interested particularly in studying about the emotional development of children.

Experiences in the area of housing varied by sex; in general, boys participated less in these activities. Data collected by Schwieger (1966) also revealed that they more frequently selected recreational equipment and the girls personal grooming equipment.

As might be expected, boys were found by Dunsing (1960) to have more money than girls but they saved less. They also earned more of their money by outside jobs. Expenditures for boys were largely related to cars, gifts, clothes, sports equipment, and recreation: for the girls to gifts, clothes, and school lunch. They also used their parents' accounts more commonly.

Social Status

When this variable was studied, several differences were revealed. In the Louisiana study by Dunn (1960), three areas relating to marriage roles were found to vary by status: care of children, education, and financial support and employment. The lower status pupils tended more to agree with traditional concepts in these areas. In Iowa, Brown (1964) found that this group was more concerned with items in the cluster of self and marriage than those in higher status groups.

Few differences appeared in the Iowa studies on child development and foods. In non-urban areas, more junior high school pupils in the lower and upper than the middle groups did baby sitting and they also participated in more activities with children. The higher the status the more likely they were to be involved in activities related to food preservation. Bruner (1965) also found little evidence that this factor was related to money management except that use of parental charge accounts by adolescents tended to increase. Moore and Holtzmann (1965) related father's occupation to scores on several scales and found relations to five. As the level of occupation from unskilled worker to professional and large businessman increased, the scores on Orientation to Society decreased indicating a more positive attitude; also, there were decreases in Resentment of Family Life Style, Social Inadequacy, and Financial Troubles. Youth whose fathers were farm owners or managers were most critical of education whereas the children of farm laborers and tenants were less critical.

Employment of Mother

The question of whether the employment of mothers is related to activities and responsibilities assumed by adolescents has been explored frequently in recent studies due, no doubt, to the great increase in such employment. In the Texas study, no significant relationships were found between scores on any of the scales and employment of mother outside the home. Pope and Loften (1960) in a survey of the home responsibilities of first-year homemaking pupils in Mississippi obtained little evidence that such employment was a factor; the daughters of working mothers slightly more commonly took

responsibility for planning family recreation and reported that entertaining in the home did not involve all family members. When two rural counties in Washington were sampled, Roy (1963) found that high school sons and daughters of employed mothers did slightly more housework and the sons also did less work outside for pay but the reverse was true for daughters. The offspring, however, were not found to have less social life or spare time when the mother worked. In contrast, Schwieger (1966) failed to find that mother's employment was associated with responsibilities for household tasks of junior high school pupils in the area of housing.

Mother's employment was not found in Iowa to be a factor in kinds and amounts of experiences with children and with food except those related to food preservation, meal preparation, and use of mixes. There appeared to be a slight tendency for daughters of working mothers in Mississippi to participate more in three types of purchases: major household items, clothing, and cosmetics. Whitmarsh (1965) approached the factor of mother being employed by comparing scores on a check list of personal problems administered to 72 girls, 16 to 18 years of age, in three secondary schools in Illinois. The mean number of problems of those whose mothers were full-time homemakers was significantly higher than that of the employed homemakers' daughters. When social class was held constant, the difference was even greater.

Place of Residence

This variable has less frequently been explored as a factor. Rural students in Texas felt greater pressures for conformity whereas urbanites resented dependence on parents and felt more family tension.

Traditional concepts concerning marriage role expectations were more common among rural than urban seniors in Louisiana. Iowa junior high school pupils who lived on farms had more younger siblings and took more responsibility for them but town youngsters did more baby sitting. Those on farms and in small towns had more experiences related to food.

Ethnic Factors

Only two recent investigations were found that included differences due to ethnic factors; the most extensive is that by Moore and Holtzmann (1965) who selected sub-samples of white and Negro pupils alike in education and employment of fathers. The Negroes had higher scores on five of the 14 scales. They were more pessimistic about their world, more authoritarian in their beliefs about child discipline, felt more family tensions, had more problems related to personal adjustment, and more concerns over conformity demands. Negroes, particularly those in smaller communities, tended to be more distrustful of people, to have more negative attitudes about society and greater feelings of inadequacy. In another sub-sample drawn from religious groups, some differences related to religion were explored. Two groups, Catholic and Baptist, in comparison with Methodists and Christians, were less optimistic about society, more critical of education, felt less adequate socially, and reported more family problems and more family tensions. Brown (1964) compared 12th-grade pupils in three ethnic groups found commonly in Iowa: Methodist, Catholic, and those whose parents or grandparents were born in The Netherlands. When their responses to a questionnaire containing topics on marriage and family living were compared with respect to eight clusters of items derived

by factor analysis, significant differences were found for only one, that which relates to dating. The Catholic students scored highest in this cluster, the "Dutch" students lowest, indicating that the former were most interested in discussing problems that pertain to dating. Interest in other areas of marriage and family living were not different.

In addition to analyzing their data by variables, these researchers investigating needs of pupils presented findings that relate to programs generally. These are too extensive to be reported here but this statement by Moore (1964) presents a challenge to the schools:

> What the quality of life will be depends in no small measure on how schools assume their responsibilities for making families more effective through education vibrant to all and at the same time adapted to each subculture and its needs.

Wage Earning

As yet, few studies have been completed relating to programs designed for wage earning; investigations in several states, however, are under way that relate to interests of girls in employment, bases for program planning, development and evaluation of pilot programs, employment opportunities, and relation of home environment and employment. There are a considerable number of schools offering wage-earning preparation. Recent issues of the American Vocational Journal and the Illinois Teacher of Home Economics described some that are operating in high schools, area vocational schools, or as classes for adults.

In some of the programs, home economics is the major source of subject matter; in a few, two vocational areas are being drawn on, such as home economics and distributive education in classes on merchandising. Nelson (1965) explored a third possible contribution to

wage-earning programs, the general education of women enrolled in post-high school vocational programs. She used several types of data to determine their needs. The graduates reported difficulties in the area of management and home maintenance was found to be the one of their least-enjoyed activities. Their employers indicated that certain personal characteristics were important. The attributes of reliability, punctuality, ability to maintain good interpersonal and personal appearance particularly were stressed.

To determine the needs for planning programs to prepare young women for occupations using home economics knowledge and skills, Jordan and Loving (1966) obtained responses to a questionnaire from about eight per cent of the approximately 20,000 girls who had attended Virginia high schools in 1954-55. More than 90 per cent believed that young women today need preparation for employment. Almost one-half indicated a desire to prepare for employment in sub-professional occupations requiring home economics knowledge and skills. Greatest interest was expressed by those currently unemployed, those living in urban areas, those who graduated from high school, those in the lower income brackets, and those who had studied home economics in high school.

To identify the knowledge and skills included in high school home economics courses that are useful in wage-earning occupations, Roberts (1966) surveyed 1,640 former students in 82 schools in Arkansas who had been enrolled in first-year classes in 1955. A large proportion of them had taken one or two additional years of homemaking education. Approximately three-fourths had been employed since graduation or leaving school. Of these going directly into

employment, most were in clerical, sales, and service occupations in the state. Almost one-half of the 777 employed indicated that knowledge and skill acquired in the high school classes were useful in their jobs. Those learnings most frequently mentioned involved personal relations, clothing, grooming, food, and etiquette. Replies from 60 employers indicated some tendency to give preference in employment to young women who had taken courses in homemaking. A panel of educators examined descriptions of types of jobs in which these former students were employed and found references to many competencies usually included in homemaking courses.

Rossi (1966) also attempted to identify the occupations where home economics knowledge and skills were useful in her study of the food service industry in one California community. A random sample of 39 was drawn from a list of 87 restaurants, cafeterias, hospitals, and nursing homes and interviews were held with the managers. When asked what kind of training should be given, the four most frequently mentioned topics were: sanitation in food handling, food preparation, personal appearance, computation of bills, and making change. All but six believed that a training program was needed by the industry, several even volunteered assistance in its initiation and 28 indicated an interest in hiring trainees.

Two attempts have been made to determine attitudes toward jobs and factors associated with satisfaction with or appeal of the job. Both found that jobs relating to child care ranked highest and that the factor of enrollment in home economics classes was not related to interest. Loftis (1966) has just completed a study in South Carolina of the attitudes of ninth- and 12th-grade girls toward 49 service-oriented jobs; i.e., those which provide service to home, institutions,

or agencies. After developing an attitude scale, My Future Plans, it was administered to 728 students who were or had been enrolled in home economics classes and 204 non-enrollees. Scores indicating level of appeal were derived and jobs were arranged in rank order. The eight ranking high among all students included four related to child care and four to health services. The least appealing were waitress and laundry worker. No significant differences were found between the two groups, between the two grades, or among three socio-economic levels. There was some indication that "job visibility" is related to job appeal.

Fentress' (1965) sample was composed of 320 former students in Ohio who responded to a questionnaire designed to obtain certain personal information as well as activities and attitudes toward 13 jobs related to home economics. Two-thirds of them were employed outside their homes for pay. Only one-fourth held home-economics-related jobs and the majority of these had part-time work only. Most of them were satisfied or very satisfied with their jobs because they enjoyed the nature of the work and the use of home economics skills. The jobs involving children were most acceptable, particularly by the non-farm girls. The highest rating, 1.83 on a five-point scale, was given to the job of assistant to nursery school teacher; the job of household maid received the lowest rating, 3.75. They tended to accept jobs as nursery school assistant, mother's helper, waitress, appliance or food demonstrator, and homemaker's assistant; and to reject the positions of household maid, short order cook, registered household worker, and housekeeping aide. The label, homemaker's assistant as compared with household maid or registered household worker, seemed to

influence the girls' degree of acceptance of the job. There was little or no relationship between the acceptance of these jobs and the intellectual level of the girl; type of residential community of the girl; educational level of her father or mother; occupational level of her father or mother; aspired occupational level of the girl; her work-values; the degree of training perceived as being required for these jobs; actual employment in these jobs; and the satisfaction of the girl in her activities at the time of the survey.

In addition to these more general studies, several have been made relating to specific areas: three in food service, three in child care, and one in clothing. In the former, quite different approaches were used.

An experiment with a one-semester program in one high school designed to prepare food service personnel was carried on by Johnson (1965). Classroom and work experiences were given the 15 students enrolled. Employers reported that the students had favorable attitudes toward criticism and work, had acceptable personal qualities, and performed satisfactorily. Pre- and post-test scores indicated an increase in knowledge of employment practices, in problem-solving ability, and in recognition of importance of personal characteristics associated with food service. Both students and staff believed that the time allotment to the program was insufficient.

Proposals for the use of the school lunch program in preparing semi-skilled workers in food service were developed by Mullen (1965) and submitted to 12 judges representing educators, school lunch managers, and institutional management specialists. One plan, a one-semester program involving the full time of the students, was rejected

but the other two were judged to meet more satisfactorily the objectives set up for a program designed for juniors and seniors in secondary schools. One of these is a two-semester plan utilizing two class periods a day; the first semester devoted to a food preparation laboratory and the second to supervised work experience in the lunch program. The other, a four-semester plan, increased both aspects to two semesters.

A survey of food service programs in 45 high schools in 21 states was conducted by Kupsinel (1964). The typical program consisted of one course taught by one instructor and involving some work experience. There was a wide range in amount of laboratory work but it was commonly given in school laboratories or lunch rooms. Thirty-three employers recommended that training be given for these jobs: waiter or waitress, general kitchen worker, and dish washer. They also desired that trainees be given more help on sanitation and cookery principles. A group of 48 trainees considered their preparation an asset in obtaining and holding their jobs but desired more training to improve effectiveness or to advance in the field.

One of the studies relating to child care was reviewed earlier, that by Whitmarsh (1966). Brittain (1965) developed an interview schedule that could be used with operators of child care centers to determine their opinions concerning possible training programs for employment.

A survey in two cities in Iowa conducted by Pease (1966) to determine what arrangements were being used for the substitute care of children has implications for training programs. A stratified sample of 401 mothers with children under 13 years of age were interviewed.

The mother was asked to account for each child's whereabouts during the time she was away from home on a given day. The care was classified as supervised at home, outside the home, or unsupervised. The persons most commonly supervising the children when the mother was employed were father, baby sitter, and relative outside the home. For the mother who was not employed, the father, relative outside the home, and neighbor were supervising the child most frequently. The person who cared for the child was predominately the grandmother and much of the care was "free." The school-age children of working mothers tended to be unsupervised for the two hours following school hours.

In the field of clothing, Riesemier (1965) investigated needs for an area vocational technical school program. She identified, through questionnaires, the personal traits and skills considered necessary to acquire success in employment in jobs involving construction, alteration, and repair of clothing. This information was obtained from 16 seamstresses, alteration personnel, department store managers, dry-cleaner owners, and personnel employed in tailoring shops in one town in Kansas. Personal cleanliness, dependability, neatness in dress, accuracy in work, ability to work well with hands, and acceptance of criticism headed the list of traits considered to be important for success in this type of occupation. Adjusting hems, replacing zippers, altering sleeve length, making a garment smaller, and adjusting waistlines were the most common alterations on women's clothing; cuffing trousers the most frequent on men's clothing. Recognition of good fit and ability to work with various types of fabrics were listed as two essential skills for seamstresses and alteration personnel and pressing skill and knowledge of fabrics were listed as essential for dry

cleaners and tailors. The findings provided one basis for planning a course in clothing related to wage earning. The two-semester course included an orientation to opportunities in the world of work related to clothing; employer-employee relationships; the development of personal traits; the importance of personal appearance; and experiences in construction and alteration of clothing as well as in dry cleaning and laundering. Eight weeks on-the-job training was recommended toward the end of the second semester to give pupils experience in applying their knowledge and developing their skills.

EDUCATIONAL PROGRAMS

Aspects of the program contributing to the accomplishment of its objectives but implemented primarily outside the class are designated here as educational programs. They include teacher-pupil conferences, home experience projects, work experiences, and home economics organizations such as Future Homemakers of America (FHA) and New Homemakers of America (NHA). No studies, however, were found relating to work experience. All of the investigations completed have been masters' theses and the number is small.

The beliefs, problems, and practices of Iowa homemaking teachers related to teacher-pupil conferences were investigated by Shellabarger (1965). Questionnaires were sent to a random sample of 78 vocational homemaking teachers in Iowa; 72 usable questionnaires were returned. Responses were summarized by tabulating frequencies. Practices most commonly used by the majority of teachers included: arranging conferences when pupils request an appointment or by having pupils come in unannounced; holding conferences during the conference period or a

free period; preparing pupils for conferences by class discussions at the beginning of the year; conferring with pupils on their problems related to the selecting and evaluation of home projects; and recording conference results. Major problems associated with conferences recognized by most teachers were the preparation for them, the scheduling of them, and finding time to record the results. The following beliefs concerning conferences with pupils were accepted by the majority: the purpose of conferences is to become better acquainted with students and to plan, discuss, and evaluate home projects; the responsibility of the teacher in the conference is to establish a comfortable atmosphere and to not reveal confidential information; and the role of the pupil in the conference is to explain her needs, make decisions, and talk.

Vanderhoff (1960) attempted to evaluate the practices and beliefs of Iowa homemaking teachers concerning the home experience program. Data were obtained from a random sampling of vocational teachers by means of a mailed questionnaire; of the 71 questionnaires sent, 61 usable responses were returned. Ten practices were used by 60 per cent or more of the teachers. Among these were: helping pupils understand home experiences through classroom discussion, making home visits to inform parents of the home experience program, and encouraging pupils to select home experience in several different areas of homemaking. Two beliefs were accepted by all of the teachers: the teacher's attitude toward home experiences affects pupil interest in home experiences and the teacher should try to encourage gradual and progressive pupil growth through home experiences. Eighty-five per cent or more of the teachers accepted three beliefs: home experiences

provide opportunities for learning which cannot be provided in the classroom, home experiences are one way of reaching the goals of the homemaking program and should not be considered as "extras," and the success of the home experience program depends greatly on the understanding and cooperation of the parents. Responses to four statements disagreed with by at least 60 per cent of the teachers were: most pupils are involved in too many activities and the added work of home experiences does not make the results worthwhile; home experiences should be required of rapid learners and be voluntary for slow learners; pupils who do not have home experiences benefit as much from homemaking class as pupils who do have home experiences; and the evaluation of a home experience should be made only in terms of the objectives chosen for the home experience.

The use of the home experience for academically handicapped pupils was explored by Bair (1960). Seventeen enrolled in a special class chose one home experience activity in each of the six areas of the curriculum. A suggested list prepared by the teacher included activities at three difficulty levels. Level I represented repetition of a single learning; Level II, the completion of several tasks in a small unit of work; and Level III, the management of a major homemaking responsibility. Instruments used to evaluate the projects included a home experience choice sheet, a change of choice sheet, a check list, and a questionnaire for parents. Examination of the 102 activities completed indicated that 68 per cent were at Level II and that 70 per cent of the pupils attained only Level I in the completion of the activity.

Investigations relating to clubs include one by Johnson (1961) who developed criteria for a home economics organization within a school system. Tentative statements were formulated on the basis of ideas found in the literature and tested on a sample of persons who had previous professional experience with FHA and/or NHA. They were subsequently revised and submitted in questionnaire form to 72 home economists who had some experience with the clubs. None of the major criteria was judged unsound or unimportant although a few sub-criteria needed to be reworded. The six major criteria for local chapters listed in order of judged importance are: operates as a part of the home economics program of the school; has a program of work which aids in the achievement of the chapter objectives; operates as a part of the school program; uses democratic procedures; and selects activities based on the needs, interests, abilities, and backgrounds of members. The major criteria for the national organization listed in order of importance are: a major purpose of the organization is education for home and family life; the same philosophy that guides the home economics education program of the nation guides the national organization; the national organization operates as a part of the home economics education program of the nation; the national organization uses democratic procedures in giving guidance and direction to state and local programs; the national organization fulfills some needs of the society in which it is operating; the national organization establishes major purposes by which local chapters are guided; and provision is made for the training of adults to guide the organization at all levels.

Carter (1961) assessed the development of student leadership qualities through the NHA. Students estimated the amount of help received in relation to speech activities, appearance, parliamentary procedure, participation in chapter activities, responsibility for chapter activities, participation in church and community services, and certain aspects of personality. Responses were obtained from 349 students who were or had been members of NHA in eight schools in Texas. The majority of members believed that they received little help in improving speech but that they received much help in developing aspects of personality.

Factors related to membership in FHA were explored by Ricketts (1965) as well as attitudes toward clubs. Teachers in 40 states administered a questionnaire to 749 members and 393 non-members. Using percentages as the basis for comparison, she found little difference with respect to education of father and mother, source of family income, wage earning by mothers, family composition, and attitudes of parents toward school organizations. Some differences were found between the two groups; the members tended to have received higher marks both in home economics and other courses, to affiliate with more school organizations, to live on a farm, and to attend smaller schools.

INSTRUCTIONAL MATERIALS AND DEVICES

Materials to be used by students while supervised by teachers are defined here as instructional materials. Textbooks are probably the classic examples and one study has been completed which had as its

purpose the development of criteria for selection. Instructional devices are broadly defined to include all materials and approaches used in the teaching of a lesson.

Seeler (1962) traced the historical development of the textbook, summarized the present methods used in textbook evaluation, showed the need for a better method of evaluation, and developed a criterion for textbook selection based on Bradfield and Moredock's levels of understanding. In this plan, the reviewer evaluated textbooks primarily on the basis of whether the book includes materials related to each of the levels of understanding.

A research team in Kentucky (Simpson, Stiles, and Gorman, 1965) had as its primary purpose the evaluation of the effectiveness of procedures used in teaching a unit on child development. A four-week unit on child development was taught by nine teachers to their 315 ninth-grade pupils. Generalizations to be taught by all nine teachers were developed but each teacher was free to select the method by which she would teach the unit. The effectiveness of the techniques were estimated by gains in attitudinal scores and by gains in knowledge of generalizations about young children using two pre- and post-tests: How Do You Feel About Young Children? and Living With Young Children. No judgment was made on the effectiveness of specific teaching techniques but several hypotheses concerning effective teaching procedures were suggested: a variety of learning experiences contributes to changes in pupil behavior; the use of problem-solving techniques adds to the effectiveness of the teaching; and lessons need to be planned to meet individual needs, interests, and abilities of the

student. Moore (1961) sought to determine if learning about children varied between an experimental group which had contacts with children in a play school and a control group which had no such contacts. Seventy seventh-grade girls were divided into two groups of equal size and matched on the basis of socio-economic background, I.Q., and baby-sitting experience. Similar lessons were taught the two groups during the semester. The experimental group participated in a baby-sitting club which met once a week for 16 weeks and observed play schools, whereas the control group learned about the behavior of children through anecdotal records and such audio-visual aids as films, filmstrips, and references. At the end of the semester, students in both groups responded to a test which was designed to determine differences in learning. Earlier the test had been developed, analyzed, and revised with a different sample of girls. Analysis of the test scores showed no significant differences between the two groups. Moore concluded that child contact by seventh-grade girls in a child development unit does not result in greater learning about children than certain other types of experiences. It is possible, however, that the test was not sufficiently sensitive to reveal differences.

LEARNING PROCESSES AND TEACHING MATERIALS

Research relating to learning processes, in home economics, has been in the areas of assessing the validity of learning theories and the evaluation of kinds of teaching situations which best promote learning. Materials developed which encourage students to learn independently are defined as teaching materials. The materials

developed relating to the vocational homemaking program are in the area of programed instruction.

A departmental project at Cornell University has as its purpose the determination of the validity of the hypothetical concept of levels of understanding in a cumulative sense. Five studies in this project have been completed; in each, instruments have been developed to test some phase of the belief that the learner proceeds in an orderly sequence from lower levels of understanding to more complex intellectual processes. A general exploration of the early adolescent's understanding of certain concepts in child development was done by Byrd (1963). Her problem was to develop a multiple-choice achievement test incorporating cognitive content which would

> (1) require the utilization of certain hypothesized mental processes or levels of understanding . . . in responding appropriately to test items; (2) demonstrate by means of scalogram analysis the extent to which understanding of the concepts included in the study was cumulative in nature; and (3) facilitate the analysis of the level of comprehension of certain concepts of human development attained by sixth- and ninth-grade students.

The concepts selected were: heredity, environment, maturation, readiness, learning, growth patterns, basic needs, individual differences, normality, socialization, and personality. Ideas associated with each of the concepts were developed into two multiple-choice tests, "What Do You Know About Children"? and "Concepts in Child Development Test." These were administered to 160 sixth-grade and 168 ninth-grade pupils, respectively. Common items under basic needs, growth patterns, and on aspect of socialization had consistent difficulty levels for all groups. Items concerned with simple concepts were generally the least difficult, whereas the items associated with high level abstractions

were the most difficult. Ninth-graders outperformed sixth-graders on most items and the girls outperformed the boys at both grade levels. Thirty-five three-item and seven four-item scales were also derived by Stouffer's zero cell analysis method of item cross-tabulation: Byrd suggests that the scales have potential for testing more than lower levels of understanding and demonstrating a sequential progression through levels of understanding. In addition, the scalogram analysis revealed more about the relationships among items than can be determined from item-total score statistics.

Jacklin (1964) tested the hypothesis that the food and nutrition knowledge and understanding of secondary pupils is cumulative with high level items being more difficult than lower level ones. The three levels of cumulative behavior proposed were: Level I, requires only recall; II requires Level I plus an understanding of the meaning involved; and Level III requires Level II plus the ability to select and use the necessary unstated principle(s) in solving a novel problem. An instrument of multiple-choice items was administered in two parts to 359 seventh- and eighth-grade girls, 10th-grade girls and boys, and girls who had taken additional homemaking courses. The test data showed that the hypothesis of cumulative levels of depth of understanding was not supported. Pupils who did not answer Level I items were frequently able to answer Level II and III items correctly. Extensive intercorrelations among items made it possible to use correct responses on items at any level as a predictor for correct responses for items at any other level or topic. Although maturity and intelligence were also influential in the number of correct

answers given, high scores on Level I items greatly increased the probability of correct responses to Level II and Level III items.

In an effort to resolve the relationship between critical thinking and knowledge, Roth (1963) developed a test of knowledge in family life education. The "Roth Knowledge Test" was designed to parallel the specifications of content material in the Spangler Critical Thinking Test in Family Relationships, Spangler (1963). The major subdivisions are: Choosing a Marriage Partner, Adjusting to Marriage, and Interaction Between the Family and Other Social Systems. Both instruments had previously been found to be satisfactory for group evaluation. They were administered on consecutive days to a group of 100 junior and senior students in an elective course called "Social Psychology" in a city in New York. Scores on the two tests were correlated while holding the intelligence variable constant. A coefficient of .59 indicates a moderately high correlation of critical thinking and knowledge in the area of family relationships. Thomas (1965) measured levels of cognitive behavior in a teaching situation.

Nine other investigations have been completed in the area of learning processes; all have as their general purpose the development of the critical thinking ability of students in the home economics classroom. Two were selected for review in this paper because it was believed they were representative of the group.

Peterson sought (1963) to investigate and identify possibilities for developing teaching-learning situations in home economics based on problem-solving experiences. A ninth-grade unit, entitled Importance of Relationships in Family and Community, was developed. The course was based on 12 competencies considered desirable for effective

personal and family life; they were adapted for high school pupils from those identified in the AHEA publication, "Home Economics--New Directions" (1959). Lessons involved problems based on the pupils previous experiences, needs, background, and abilities. The Family Relations Analysis Test was developed to assess pupil growth toward selected aspects of critical thinking. It was administered to the pupils before and after the experimental unit was taught and indicated that there was pupil growth toward the objectives of the unit.

To determine whether student learning is more effective when lessons are based upon goals which students have helped to formulate and when they assist in evaluating the progress made toward the accomplishment of these goals was the purpose of Kalich's (1963) study. Thirty-five ninth-grade girls participated; 17 were in an experimental group and 18 were in a control group. Those in the former helped to set up class goals, participated in evaluating progress toward these goals, and were taught by "democratic" procedures. Those in the control group were given the same set of goals by the teacher and were taught by "autocratic" methods. The same test was given to both groups as a pre- and post-test. When progress of the two groups was compared, no significant difference was found.

A pilot study in the area of programed instruction was begun at the University of North Carolina, Greensboro, in 1962. At that time, no published programed materials were available in the area of home economics. A self-instructional program on the sewing machine was developed by Moore (1963) and revised and field tested by Shoffner (1964). Supplementary materials developed to accompany the program

for field testing were: an answer book, a time-and-error record, a student information questionnaire, a student reaction form, and a teacher reaction interview record. Four schools near Greensboro were selected to participate in the study; 108 girls enrolled in first-year home economics classes proceeded through the Sewing Machine Program. Results of the field test indicated that students averaged 12.0 errors on the program--a 3.6 per cent error rate. The mean time required by students to complete the program was 256.8 minutes or approximately five 55-minute class periods. Students in the lower achievement group required more time to complete the program and made more errors on the program than did students in the higher achievement group.

At Cornell University, Weber (1965) developed eight units of programed instruction designed to teach basic nutrition. Eight generalizations were derived from a delineation of conceptual information and facts basic to an understanding of nutrition. The units were used experimentally during two weeks by 119 junior high school students. A control group of 81 pupils did not study the programed unit and did not have any other nutrition education during the period. The effectiveness of the program was measured by two instruments, both administered as pre- and post-tests. The test data led to the conclusion that basic nutrition can be taught by the programed units because the mean post-test score of experimental subjects was significantly greater than their mean pre-test score and their mean post-test score was significantly greater than that of the control group.

A linear program in the area of family relationships was developed for the seventh-grade and eighth-grade student who is deaf. Kennedy's (1965) program is entitled "Who Am I"? and was designed to

be used as an introduction to a junior high school unit in family relationships. Eleven students who were deaf used the program and it was also administered to 33 seventh-grade students who were slow learners but had no hearing defects. The latter group was included in the study because it was believed the program would also be of value to this group. It was evaluated by a 30-item test administered both as a pre- and post-test. The results gave evidence that learning did take place; 37 of the 43 students had a gain in raw score from the pre- to the post-test. The mean gain was six points, or 20 per cent of the total number of items on the test. Through informal interview and formal questionnaire, the students indicated a favorable attitude toward the program method of learning.

STUDENT PERSONNEL SERVICES

Research related to this topic has been largely concerned with factors influencing enrollment and characteristics of girls enrolled in these classes; information useful in counseling. Both previous to and since 1960, many of the studies have been carried on only in one school system and, hence, have local value only. Few state-wide studies were available for review. Some attention has also been given to the attitudes of counselors toward home economics as an area of study, attitudes of girls toward home economics and home-economics-related jobs, and to the development of means of measuring interests. Several masters' studies have been completed concerning attitudes of either counselors, administrators, faculty, students, or parents toward home economics; most of these, however, have been concerned with beliefs about the homemaking program in a local setting.

Two state-wide studies have been completed in which factors influencing enrollment in the secondary home economics program were investigated. Simpson, Stiles, and Gorman (1963) obtained responses to questionnaires from home economics teachers, students, and principals in 31 high schools in Kentucky in which there had been an increased home economics enrollment between the 1957-58 and the 1960-61 school years and in 40 high schools which had decreased enrollments. Quality of the home economics program was cited by the students, teachers, and principals as the most important factor influencing students to enroll in home economics classes. Students' evaluation of the quality indicated that schools with increased enrollment had a higher quality program than those with decreased enrollment. Students, principals, and teachers expressed different opinions concerning the pressures influencing enrollment. In regard to promoting enrollment, students believed that the person influencing them to the greatest degree was the student herself; parents were the next most frequently mentioned influence. Principals believed that the home economics teachers exerted the most influence on students to take home economics and considered the increased admission requirements for college and requirements for graduation, including the science requirements, as the most important factor in discouraging students to enroll. The teachers also indicated that the increased requirements for graduation, including the science requirements, discouraged enrollment. The most common reason given by students who did not elect home economics was that they needed to meet college requirements or to prepare for a job. School schedules and patterns of offerings in home economics appeared to have little effect. In general, all three groups of

persons had a positive attitude toward the home economics program and there was little indication of the belief that home economics is a "snap" course and is for the slow student.

Riley (1961) obtained responses to questionnaires from students and home economics teachers in 139 high schools and from administrators in 250 Ohio schools. She found that almost 73 per cent of the girls completed at least one year of high school home economics and that the majority of these completed two years of the four-year home economics program. Enrollment in the last two years was affected by scheduling conflicts with both academic and commercial courses. Conflicts with the latter, however, occurred twice as often as with the former.

In a survey of 1,618 senior girls in the June 1957 graduating classes from 46 schools in several cities in Illinois outside Chicago, Hand (1960) compared the high school programs and activities of the girls who had married and become full-time homemakers by early fall 1957 with the remaining girls in the sample. The two groups completed essentially the same number of semesters of work in art, music, English, social studies, and science. In the areas of home economics and business education, the "homemaker" group completed substantially more units than the other group, whereas in the areas of mathematics and foreign languages the "non-homemaker" group completed appreciably more work.

Analyzing responses from 588 senior girls in five high schools in an urban area of Iowa, Schwartz (1963) found that girls who were high scholastic achievers, from higher socio-economic levels, and college-bound tended to take less high school home economics than girls of opposite characteristics. In addition, homemaking classes were

described less favorably by girls with high scholastic achievement who were college-bound. Although girls from higher socio-economic levels viewed homemaking classes more favorably than those from lower levels, they enrolled less frequently in these classes.

Factors associated with the election of high school home economics by college-bound high school girls were investigated by Downing (1963). Data were collected from all 11th-grade girls in 12 high schools in New York and New Jersey who indicated that they planned to enter college. Analysis of the responses suggests that a good senior high school homemaking program, a satisfying experience in junior high school homemaking classes, and value placed on the home economics program by persons close to the girls all have a positive influence on the college-bound girl in electing a homemaking course. Investigation of the socio-economic levels of the girls suggests the slightest tendency toward a greater election of home economics courses by college-bound girls from the lower socio-economic levels.

These studies suggest that high school girls need more information about the high school homemaking program. In addition, for those courses primarily concerned with preparation for home and family life, girls need help in perceiving the potential use in their future roles as wife and mother.

The findings by Simpson, Stiles, and Gorman (1963) and Downing (1963) that persons close to high school girls are influential in the election or non-election of high school home economics suggests that knowledge of the attitudes of people, such as secondary school superintendents, principals, and guidance counselors, toward home economics is desirable.

Goldsmith (1960) sought responses to an opinionnaire from 750 superintendents, 750 principals, and 500 guidance counselors considered representative of the 40,000 administrators and the 14,000 guidance counselors listed in government bulletins; approximately 65 per cent responded. Analysis of the data showed no significant differences among the groups in their attitudes toward home economics. Favorable beliefs concerning the home economics curricula were: it meets the needs of adolescents and should be continued in those schools where a broad range of subject matter is taught and when it stimulates learning. Unfavorable attitudes about the curricula related to too much stress on cooking and sewing and the duplication of information at more than one level.

Since counseling is frequently for the purpose of vocational selection, the attitudes and knowledge of girls about home economics as well as home-economics-related jobs are important.

Schwartz (1963) found that no difference was apparent in the description of the home economics profession between the girls who were high and low achievers and between the girls who were from high and low socio-economic levels. Although high achievers and those from higher socio-economic levels were better able to identify home economics occupations than the comparable other groups, the evidence suggests that all of the senior girls knew less than is desirable about possible positions for home economists.

As an aid to helping high school girls in vocational selection, Yocom (1963) began the development of a home economics interest inventory for high school girls. She discovered that it is possible to differentiate between the interests of high school girls who are

and are not interested in majoring in home economics in college. With further refinement, this instrument has possibilities for use in the vocational guidance of high school girls who are thinking of becoming professional home economists.

FACILITIES AND EQUIPMENT

Very little research has been completed recently in this area of home economics departments. Two such studies were available and several articles have been published relating to general principles upon which to base the planning of a department. The latter, however, have been primarily based upon the author's experience or visits to several departments.

An evaluation of the laundry facilities of five junior and 25 senior high schools in Northwestern Ohio was made by Cutler (1964). The laundry facilities in 69 per cent were rated "poor" or "very poor." The facilities were not only inefficiently arranged but also lacked in storage space.

A description of the minimum space requirements for a department designed primarily for wage-earning programs was prepared by Lee (1966). The space arrangement illustrated is for a maximum class size of 16 and focuses on employment preparation at different levels in the areas of food services, care of children, clothing services, and homemaker services. Included in the plan are a child-care laboratory, a food service training laboratory, and a large multipurpose room between the two. Suggestions for space requirements and facilities are also included.

Dalrymple and Youmans (1963), Simpson and Barrow (1965), and Taylor and Christian (1965) agreed that an understanding of the scope, classroom activities, and instructional methods of the home economics program are basic to the development of functional facilities for the department. Additional concepts considered important in the development of home economics facilities include: a variety of settings through the use of flexible space and mobile equipment; a physical environment that is aesthetically pleasing, incorporates safety measures, and is physically comfortable; a reduction or elimination of distracting influences; a consideration of the needs of high school students and adults; and the adaptability of the space for day or evening use.

TEACHER EDUCATION

The number of studies carried on previous to 1959 in teacher education is second only to the number relating to secondary school curriculum. This is not surprising since it is commonly accepted that the teacher is the crucial element in the secondary school program. Approximately 75 investigations have been completed since 1959 but almost two-thirds of these were not available for review or were too specific in nature to justify inclusion.

One of the most important aspects of teacher education relates to the student who is preparing to become a teacher. Many colleges and universities are using one or more bases for selecting students but educators are attempting to validate selection criteria.

Some selection takes place through attrition but the prospective teachers lost by this process may not be the ones who are least

likely to be successful t· ·ers. Gaskill (1965) investigated the academic standing and certain pe·sonal qualities of 282 students at Iowa State University to determine differences among these groups: those who completed the program and entered teaching, those who were graduated but did not teach the first year, and those who left the program before completion by transferring to another curriculum or by dropping out of the University. Scores were used from two personality inventories, the Guilford Zimmerman Temperament Survey (GZTS) and the Minnesota Counseling Inventory (MCI), as well as scores from an attitude inventory, Just Suppose Inventory (JSI) and an interest inventory, Johnson Home Economics Interest Inventory (JHEII). One variable, Personal Relations, from the GZTS, differentiated among the groups; those who dropped from the University had mean scores significantly lower than those who were graduated or transferred to another department. Two variables from the MCI also differed among these groups. The drop-outs tended to be more defensive as indicated by the Validity scores and least well adjusted to reality and the transfers least defensive and best adjusted to reality. The mean scores of graduates preparing to teach were somewhat lower than those of the transfers. One attitudinal measure, attitude toward working with ethnic groups other than one's own, from the JSI yielded mean scores that differed significantly. The graduates tended to have more favorable attitudes than the other two groups. The quality-point average taken at the end of the second year in the University was also highest for the graduates.

When the graduates were divided into three groups, teachers, extension workers, and others, the former were found least active

physically, General Activity on the GZTS, and least likely to be socially adept, Social Relationships on the MCI. The teachers, however, scored highest on five attitudes on the JSI: toward parents of school children, toward people in different sized communities, toward upper- and middle-classes and toward three-generation homes; and on Interest in Work With Young Children, JHEII. Their quality-point average was similar to the extension group but both were lower than that of graduates not entering either of these professions. The latter contained several who entered graduate schools.

The problem of what bases to use in selecting students for teacher preparation is crucial. Breaux (1963) investigated the beliefs of 285 home economics educators from 85 per cent of the degree-granting institutions and found they all believed that personality assessment is important in teacher selection and 58 per cent that personality is more important than academic achievement, provided a minimum quality-point average is achieved. In actual practice, however, 81 per cent reported that they were using the latter and only 39 per cent some measure of personality as bases for admission to the programs.

Several other studies have been made in an attempt to determine the characteristics of students preparing to teach. In some, these characteristics have been related to success in student teaching or on the job.

Monts (1963) attempted to determine the value of grade-point averages and certain inventories in predicting the success of 31 home economics majors in student teaching. The GZTS, Minnesota Teacher Attitude Inventory (MTAI), and the JHEII were administered and a

rating scale was devised to evaluate performance during student teaching. A composite rating by the supervising teacher and the college supervisor was used as the criterion of success. The highest correlation, 0.32, was that between grade-point average for home economics courses and the composite rating. As Monts recognized, the size of the sample is small and the reliability of the ratings is open to question.

Dotson (1963), also interested in predicting student teaching success, investigated the relation of student teaching grades to grade-point average (GPA) and scores on the Teacher Judgment Test (TJT) and MTAI using a sample of 110 students at West Virginia University. The correlation between student teaching grades and GPA was statistically significant and student teaching grades approached significance with the TJT percentiles, but not with the MTAI. Analysis also revealed that the MTAI and the TJT were not related to each other. The researcher concluded that GPA is one of the best indicators of success in student teaching.

The study by Gritzmacher (1963) was to determine whether certain measures would differentiate between students with high and low proficiency in student teaching. Two groups of 10 student teachers, one high and the other low in proficiency, were selected from a population of 96 students on the basis of their grades in a course involving student teaching and class work at Cornell University. Data were gathered by administering the JHEII and the Runner Studies of Attitude Patterns, Eleventh Revision (RSAP). In addition, total grades and grades in courses classified into 14 areas were used.

Statistically significant differences in the expected direction were found between the two groups for nine variables: frustration and teacher function as director, measured by the RSAP; total grade-point average; and grades in child development and family relations, in household economics and mangement, in textiles and clothing, in biological and physical science, in social sciences, in home economics education. The characteristics not found to differentiate between the groups were: 22 RSAP variables, scores on the JHEII, secondary teaching, and grades in six areas--food and nutrition, housing and design, institutional management, fine arts, languages and professional education courses other than those in home economics education.

An exploratory study of the creativity of the student as a basis for prediction of grades in student teaching was made by McDonald (1961). The Watson-Glazer Critical Thinking Appraisal (WGGTA) Form AM, the AC Test of Creative Ability (TCA), and records kept in the Department of Home Economics Education at the University of Wisconsin were used to determine the creative resourcefulness of nine senior students. For this limited group, the level of performance based on grade in student teaching was related to the level of creativity. Also, the level of certain aspects of creative thinking rose during the student teaching experience.

The difficulty of predicting success on the job is illustrated in an attempt being made in a longitudinal study at Iowa State University. Crabtree (1965) analyzed data for 66 subjects who taught in Iowa the first year after graduation. Personal qualities measured by the GZTS and the Minnesota Counseling Inventory (MCI), vocational interests measured by the JHEII, attitudes toward different groups measured by

the JSI, and cumulative quality-point averages were the predictors. Criteria of success were pupil gain in ability to solve problems in homemaking measured by pre- and post-achievement tests for ninth- and 10th-grade pupils, teacher-pupil rapport measured by two forms of the Student Estimate of Teacher Concern (SETC), and adjustment to school and community measured by a check sheet filled out by the school administrator. A panel of six judges, professors of education and educational psychology, estimated the importance of each of 34 predictors and the six measures of success using a certainty scale to obtain weights. Composite prediction and criterion scores were derived and intercorrelations obtained After the predictors which yielded low or negative correlations with the composite success score were dropped from the analyses, the remaining predictors correlated 0.41 with success--highly significant but too low for individual prediction. The 11 predictors found to be most useful were academic achievement; two scores from the GZTS, restraint and general activity; two from the MCI, emotional stability and conformity; five sub-scores and the total score from the JSI, attitudes toward foreign-born, toward persons with different educational backgrounds, toward low-income families, toward middle- and upper-class groups, toward ethnic groups. Additional cases and the use of clinical rather than statistical analysis of predictive data are now being studied in an attempt to improve the prediction.

Ford and Hoyt (1960) in an exploratory study investigated the psychological characteristics of homemaking teachers on the assumption that these would contribute to the selection of students preparing to teach. These characteristics were also related to classroom

effectiveness. A sample of 712 teachers in 26 states were administered a biographical data form, six attitude inventories: the MTAI and five constructed as part of the project. Eighty-five of these teachers, selected at random, were observed for at least one-half day and rated on the basis of Criteria for Classroom Effectiveness. Pupils in one of their classes responded to a pupil-relationship inventory.

Some of their important findings indicated that the teachers who entered the profession because of liking people and teachers in the larger school districts scored higher on the people-centered inventories. The means on the pupil-relationship inventory were higher for teachers in the smaller school districts but there was little relation between inventory scores and years of experience.

The investigators concluded that the teaching effectiveness is so complex that it cannot be assessed satisfactorily by a single observation. They recommended an increase in the number of observations and also that the inventories be increased in length.

Halchin (1965) approached the problem of teacher effectiveness by studying the factors in early home life that are related to their ability to empathize with students. Questionnaires were administered to 12th-grade students in New York and Pennsylvania to identify 50 high and 50 low empathy teachers. The home and family background of these teachers was investigated by questionnaire and interview. The high empathizers had these family experiences in common: celebrated holidays together, had few quarrels, had close relationships with family members and others outside the family, and enjoyed activities involving others. Teachers whose students responses indicated that they were low empathizers came from families which lacked close

relationships, had more quarrels, were not active in church affairs, were critical of others in and outside of the home, did not welcome others into the home, and had problems with others throughout their childhood experiences.

Professional commitment has been the characteristic involved in two studies. Loftis (1962) developed an inventory, Measure of Professional Commitment (MOPC), which she found differentiated among college administrators, teachers, and graduate assistants. Using the MOPC, Laughlin (1965) studied the professional commitment of 194 senior women in the College of Home Economics at Iowa State University to investigate its effectiveness in differentiating among seniors in various curricula. She also related the scores to characteristics of college students thought to be related to the development of professional commitment. Intercorrelations among the 100 items on the MOPC and 14 on the questionnaire for 13 sub-groups based on curricula and marital status were computed and eight clusters were obtained. The cluster from the questionnaire relating to participation in pre-professional activities did not differentiate among the curricular groups but that involving professional orientation and future goals and lack of immediate professional plans did differentiate. Only two MOPC clusters--professionalism and leadership--were significantly different by curriculum. Suggestions were made for the revision of the MOPC.

In a cooperative investigation by several institutions in the Central Region, an attempt was made to determine what happens to the attitudes and interests of students during their college years and the first year of teaching. The final report is in press but

preliminary reports are available. Personnel from three universities took major responsibility analyzing the data for the various aspects: University of Minnesota, attitudes toward children; The Ohio State University, attitudes toward families and other groups; Iowa State University, vocational interests. Data were collected at each of these institutions as well as at certain other cooperating colleges and universities.

Ford (1962) analyzed the scores from several institutions on the MTAI. Freshmen, seniors, and first-year teachers responded to the Inventory and to special data sheets. The scores of students increased significantly during the college years but when the mean scores of 364 teachers who took the MTAI both when seniors and after one semester of teaching were compared, a loss of more than 20 points had occurred.

The scores for 1,100 freshmen differed significantly by type of institution: teachers college students had the highest mean, land-grant universities were second, and separate land-grant colleges were lowest. No significant differences were found when the students were classified by education of mother, occupation of father, and amount of experience with children previous to college. The scores of the 251 seniors also varied by type of institution; the mean for the land-grant universities was significantly higher than that for the land-grant colleges. Correlations between MTAI scores and academic ability as measured by the American Council on Education Psychological Examination (OSPE) were not significant. Also, the MTAI scores were not related to size of high school from which the seniors had graduated or the number of siblings.

A sample of 1,939 experienced teachers in six states also responded to the MTAI. The factors found to be significantly associated with the scores were: size of school, type of program, satisfaction with their teaching load, and type of assistance from supervisors. Those in the smallest secondary schools, 15 or less teachers, had the lowest mean scores, those in middle-sized schools, 16 to 75 teachers, had the highest mean scores. Teachers in vocational programs had higher means than those in nonvocational programs or a combination. The scores for teachers who were satisfied with their teaching load and those who indicated that their supervisors gave them positive assistance tended to be higher than when the opposite conditions pertained.

The JHEII was administered twice, the freshman and senior years, to students enrolled in home economics education departments in 17 colleges and universities and also to those who taught the first year after graduation from eight universities. Chadderdon (1962) reports that the mean scores of 404 students on the JHEII, secondary teaching, increased slightly from the freshman to the senior year in college and that the scores of the 165 who became teachers fell during the first year of teaching. Correlations between freshmen and seniors scores were 0.36 and between seniors and teachers, 0.45. Both are statistically significant but not high enough to be used alone as a basis for prediction. Type of institution, separate land-grant college and state university, was not a source of variance. The hypotheses were rejected that interest scores of freshmen and seniors were related to amount of homemaking education (classes and 4-H Club experience) and that these scores were related to amount of experience with children

before college. When the scores of the teachers were analyzed with reference to teaching load and facilities in their departments, no significant relationships were found. A large majority, 69 per cent, were satisfied with their load but fewer, 40 per cent, judged their space and equipment adequate. More than three-fourths, 82 per cent, indicated that they liked many aspects of teaching and 17 per cent liked some aspects.

The seniors were asked to indicate which of 12 reasons motivated their desire to prepare to teach. About one-fourth, 28 per cent, checked none of the five reasons classified as practical. Close to one-half, 43 per cent, failed to check either of the two related to working with people but 67 per cent indicated that breadth of curriculum had influenced their choice of education as a major. To validate the interest scores, the seniors indicated which of 14 home economics occupations they would prefer if free to choose. The hypothesis that interest scores were related to these choices was supported, the difference between the mean scores of those choosing and those not choosing teaching approached significance at the one per cent level.

Lehman (1962) developed an instrument, the Just Suppose Inventory,* to determine the degree to which students or teachers accept families of different types such as broken families, farm families, parents with little education, families from low and high socio-economic groups, and with different religious beliefs. Twelve situations which a teacher might face are described and 15 statements

*Recently, this Inventory has been copyrighted and entitled The Teacher and Community.

representing different viewpoints or degrees of acceptance for each situation are listed. In the development of the Inventory a pool of statements was obtained by incomplete sentences administered to 400 students in five colleges. Forty for each situation were selected by judges and administered to 200 teachers who had been rated as acceptant or non-acceptant. The statements which discriminated best were then pre-tested in one university. Interviews with 50 of these respondents were also helpful in the revision.

In this aspect of the cooperative study, the Inventory was administered to 513 juniors, 366 seniors, and 197 first-year teachers from six universities after satisfactory reliabilities had been established (Chadderdon et al., 1966). During the last two years in college, mean scores on nine of the problems or subproblems changed significantly beyond the .01 or .05 levels. The changes were in the direction of more favorable attitudes toward city people, divorced persons, working mothers, upper-class families, and the aged, but became less favorable toward town people, middle-class families, factory workers, and foreign-born. Differences between the mean scores of seniors and first-year teachers were obtained on 10 problems; they became less favorable toward parents, working mothers, foreign-born, persons with little education, slum families, Catholics, problem school, factory workers, another race, and youth. The mean scores from the six universities were compared and found to vary significantly at each of these testing periods; on eight problems at the junior, 11 at the senior, and five at the teacher level. Size of home community, parental education, and father's occupation were variables associated with scores on several of the problems. The number and types of

pleasant experiences that students had with unlike groups were also related to their scores on the Inventory. For example, total scores of juniors varied significantly with such experiences and with opportunities to study about other groups in church or college. Some of the work experiences, however, tended to be associated with lower scores for juniors.

The findings in the regional study of juniors that certain experiences tended to be associated with low JSI scores stimulated Lehman and Haas (1966) to develop a non-credit seminar for the purpose of helping students at The Ohio State University explore their attitudes after they had plotted their freshman and junior JSI scores on a profile sheet. The eight who decided to participate in the seminar were given references to read and had experiences with Negro families, subteen girls in a settlement house, mentally-retarded children, Negro college women, and junior high school pupils. Group meetings were held every two weeks to explore their attitudes and to discuss their experiences and readings. The program was evaluated through individual conferences recorded on tape and judgments of students and staff. The general reaction of the students was favorable and the most frequent valuable experience cited was that with the girls in a community center. Teachers in charge of the seminar thought students became increasingly realistic about the role of the teacher as she works with many types of persons, but it was evident that a more structured program and a longer time were needed to effect any extensive change in attitudes.

Several recent studies relate to curriculum planning for both in- and pre-service teacher education programs. The judgments of

teacher educators, students, and teachers have been sought as one basis for program planning.

The beliefs and practices of 176 home economics educators relative to 76 generalizations in teacher education were examined by Brennan (1963). The group, composed of 176 college teacher educators, supervising teachers, and state and city supervisors from Michigan and Pennsylvania, was asked to select from the list the most important generalizations relating to effective teaching of home economics. Ninety per cent agreed on seven as very important. Four relate to program planning, one each to the role of the teacher, the relation of subject matter to families, and evaluation.

These educators also believed that 80 per cent of the learnings related to the generalizations were best acquired at the pre-service level but there were some differences of opinion among the three groups: teacher educators, supervising teachers, and supervisors. Twelve of the generalizations were found to be included in the teaching of 85 per cent of the entire sample.

The judgments of college teachers as well as students and graduates were used by Lea (1963) who studied the curriculum at Oregon State University. A majority of the home economics faculty thought that subject-matter courses in home economics for students preparing to teach should not differ from those for students in other professional areas of home economics and that preparation for a professional area should be accomplished in special courses. A majority of the first-year graduates and current seniors disagreed with this point of view: they believed that they would be better prepared as teachers if all home economics courses would emphasize the application of the subject

matter to their future needs as teachers. The seniors also believed that home economics courses for teachers should differ from those taken by other majors so that the course could be specifically geared to their needs.

As part of the evaluation of the entire vocational program by the Committee of the Michigan Vocational Education Evaluation Project (1963), a questionnaire was sent to 113 recent graduates who had had from one month to three years of teaching experience. They were asked to judge the emphasis placed upon certain aspects of their program. In general, the 50 teachers who responded thought that the emphasis given to the physical sciences, natural sciences, behavioral sciences, and communication skills was "about right," but in the areas of philosophy and the arts, their reactions were divided between "too little" and "about right." They believed that the emphasis given to education courses, adolescent psychology, psychology of learning, social foundations, student teaching, and seminars was "about right." In addition, responses were obtained from 472 more experienced teachers in reimbursed vocational programs and from all of the teacher educators in home economics in Michigan. There was some agreement about the importance of the sociological, psychological, the artistic, and the scientific emphases in the preparation of teachers. Eighty-six per cent believed that "too little" emphasis was given to the sociological-psychological aspect. In general, there was satisfaction with the amount of emphasis given courses in these areas: foods and nutrition, clothing and textiles, housing, home furnishings, household equipment, and art and design. In family relations, marriage, child development, home management, consumer education, and family economics, a substantial number indicated that there was "too little" emphasis.

Cross (1960) also sought the judgment of teachers in evaluating pre-service programs. She obtained responses from 301 first- and second-year homemaking teachers in 42 states. The majority of respondents indicated satisfactory college preparation for two-thirds of their activities. Areas of inadequate preparation in subject matter were: food production, housing, and home improvements. Community relationships; working with an advisory council, with boys, and with FHA and NHA; and participation in the total school program and in community activities presented problems for which their college program had not adequately prepared them.

Another approach was used by Spencer (1963) who sought to answer the question, What specific professional attributes contribute to successful teaching? She asked the opinions of 21 state and city supervisors of home economics in Indiana and New York. The attributes most frequently assigned to successful teachers they had recently visited were: having well-planned lessons, being able to manage a class well, having excellent rapport with students, taking every opportunity to study and learn, and cooperating with the school and community. Two frequent answers to a second question, concerning the areas of work on which home economics teachers need improvement, were planning and organizing work and communicating to others the significance and contribution of home economics. In response to a third question relating to the attributes deemed most important for student teachers to acquire were high ethical standards, ability to plan lessons and units of work, and awareness of the total picture of education and of the contribution to be made by home economics. The inquiry was pursued further by means of interviews with three Cornell University professors who had

observed first-year homemaking teachers. They thought that first-year teachers needed to do more long-range planning and pre-testing and to give more emphasis to the principles involved than to the activity.

The preparation of teachers for wage-earning programs has been given almost no consideration. Latham (1965) did collect some data about the work experiences of secondary teachers in Idaho in connection with a study of employment opportunities. Approximately 85 per cent of the 70 teachers surveyed had had work experience other than teaching. It was most commonly in food service, working with children, and sewing. Van Horn (1964) recommended that such teachers, in addition to having skill in the art of teaching and an understanding of problems confronting families, have "experience that gives insight into the requirements for success as a wage-earner. . . ." She believes this is so important that it would be better, if a teacher were not available with both a college degree and work experience, to select a prospective teacher with work experience and provide her with intensive in-service education.

The roles played by personnel involved in the student teaching situation have been investigated in three studies. Leonard (1965) determined differences among three groups, principals, supervising teachers, and college supervisors, of role expectations and perceptions. She used a sample of 138 persons in a six-state area in South Central United States. The statistically significant differences found were greatest between the college supervisors and supervising teachers and least between principals and supervising teachers. These were largely in three areas: the degree of participation in evaluation, leadership, and coordination. The principals tended to expect "a moderate" amount whereas the other groups expected more than average.

Leonard also identified differences among the three groups with reference to guiding principles of supervision. The largest number of significant differences were between college supervisors and principals, 30 of the 50; only one was found between the latter and the supervising teachers. The differences were largely the extent of acceptance of a principle rather than acceptance-rejection.

A study of practices relating to roles in the student teaching situation which produce satisfactory supervisory relationships was made by Walsh (1960). A total of 355 student teachers, supervising teachers, and college supervisors in nine states in the Pacific Region responded to a questionnaire involving 96 practices. At least 75 per cent of the college supervisors agreed with 56 of the practices whereas this proportion of the supervisors agreed with 45 and the student teachers with 37. The latter and the college supervisors agreed closely on only 17, whereas they agreed with the supervising teachers on 37. The agreement between the two supervising groups was somewhat higher--they agreed on 42 of the practices. All three groups tended to agree less with those practices related to their own roles than to the roles of the other groups.

Four universities have been involved in a cooperative research effort to explore the special contribution of the college supervisor. Some of the findings in one institution, Purdue University, were reported by LaRowe (1965). The critical-incident technique was used to collect data from 35 student teachers, 37 supervising teachers, and four college supervisors. They kept records of incidents involving behaviors of the college supervisors.

These incidents were classified with reference to roles assumed: directive, less-directive, permissive, evaluative, and negative. The directive and permissive behaviors of the four college supervisors tended most frequently to be used in providing information, the less-directive in giving security, the evaluative in judgment-giving roles. In general, the roles assumed were judged to have greater impact upon the supervising teacher than on the student teacher. Also, the former tended to perceive the college supervisor as having more impact on the student teaching than did the student teacher.

Research on the relationship of dogmatism, personal-professional rapport, and attitudes with the influence of student teachers upon their cooperating teacher was carried out by Rosenfeld (1963). Pre- and post-MTAI scores, Dogmatism Scale (DS) scores, and information from a questionnaire were collected from 60 cooperating teachers who were supervising their first student teachers.

The less dogmatic cooperating teachers tended to establish a higher degree of rapport with pupils, but their degree of dogmatism was not significantly related to rapport between the cooperating and student teacher or to pre-professional rapport with student teachers. The more dogmatic a cooperating teacher is, after working with her first student teacher, the more likely she is to have a positive change in attitude toward classroom pupils, as reflected by MTAI scores.

An exploratory study of the adaptation of home economics student teachers to the community was made by Carmichael (1961) using a sample of 32 student teachers, their supervising teachers, and 899 pupils. Instruments were developed for determining three variables: knowledge, motivation, and behavior of student teachers in adapting their teaching

to the community. Positive relations were found among participation in community affairs by the student teachers, their knowledge of the community, their desire to adapt their teaching to the community, and the use of community resources.

Evaluation of the student teaching experience is a much needed type of investigation. Three recent attempts have been made using quite different approaches: judgments of supervisors and of student teachers and satisfactions derived by the latter.

A study of characteristic differences in the proficiency of a selected group of 30 home economics student teachers in Pennsylvania was completed by Atkins (1960). They were judged by a panel of supervisors and classified into three groups: outstanding, average, and non-proficient. Their supervising teachers, college supervisors, and students were interviewed with reference to six areas. The outstanding student teachers as a group were strongest in their relationships with pupils and in their knowledge and presentation of subject matter. The proficiencies of average student teachers were their relationships with supervisors, school personnel, and community and their interest in the home economics profession. The non-proficient were weak in each of the six areas but were strongest with respect to neatness in personal appearance and work. They were weakest in their relationships with pupils and supervisors; planning and adapting learnings to pupil needs, interests, and abilities; planning for classes; and in managing their time.

Howell (1965) studied 50 Iowa student teachers to determine individual differences in progress toward 12 groups of objectives related to guiding learning as judged by student teachers and supervising

teachers. The majority of the students believed that they had made some progress on most of the groups of objectives. There was agreement between the estimates of progress toward the objectives by student teachers and their supervising teachers in approximately 75 per cent of the judgments. For two, planning and carrying out learning experiences and evaluating learning, all of the students believed that progress had been made. The objectives which students indicated most frequently on which they had no chance to make progress related to working with home experiences, pupil-teacher conferences, and working with Future Homemakers of America chapters. When responses of the student and her supervising teacher within student teaching centers were correlated, there were significant differences at four of the six centers on five groups of items: knowing the community and families, joint planning with pupils, directing home experiences, making home visits, and holding conferences with pupils.

To locate the areas of greatest and least satisfaction in student teaching and to determine if there is a relationship between satisfaction and the number of activities experienced, Chamberlain (1963) developed a check list which was administered to 64 student teachers from five universities and colleges in Eastern and Southern states. The areas of greatest satisfaction were found to be those concerning relationships with their supervising teachers and their pupils. The areas of least satisfaction were related to the home economics facilities in the centers and their teaching and co-curricular load. Many expressed the belief that the experience would have been more valuable if more phases or areas of the subject had been taught and if there had been more help from their college supervisors and directing

teachers in achievement test construction and the use of evaluation procedures. Opportunities for social contacts with their peer group and too little time for community activities were also sources of dissatisfaction. An analysis of scores derived from the satisfaction check list revealed that the shorter the length of the student teaching period, the lower the satisfaction scores and the greater the number of activities in which they participated the greater the satisfaction.

ADMINISTRATION AND SUPERVISION

Problems relating to administration have been given little attention recently. One investigation was found for each of these aspects: budgeting, ability grouping, and use of advisory groups. Several studies relating to in-service needs of teachers are included because they should be useful from the standpoint of findings and/or techniques of research. Also, some assessments have been made of the value of in-service programs.

Ashworth (1962) obtained data concerning the home economics budget from teachers in 56 of the 119 high schools in Connecticut which had home economics departments. Of these schools, almost 97 per cent had a plan upon which to base the amount of money needed for the program. Twenty per cent used cost per student as a base and 33 per cent based their plan on the amount spent the previous year. A comparison of the enrollment in the high school with the amount of money spent per pupil showed that, in general, the amount per pupil decreased as the high school's enrollment increased. Teachers in 75 per cent of the schools participated in the planning of the budget for

the homemaking department. The budgets in 75 per cent of the schools included provisions for replacement, repairs, and new equipment. In 66 per cent of the schools, the services and equipment were paid for in a combination of ways: requisitions, charge accounts, and petty cash.

To determine the extent of ability grouping in home economics classes in the public high schools in New York State, Waag (1965) sent questionnaires to both the guidance personnel and home economics teachers in a random sample of 250 schools. A 76 per cent return was obtained from those schools where both the home economics teachers and the guidance personnel responded. More ability grouping was being used in the junior high school classes than in the senior high school classes, primarily because of larger enrollments and subsequently more sections. In general, however, grouping provided some sections which were homogeneous in ability as indicated by IQ estimates and others which included a range of abilities. More than two-thirds of the junior high classes contained pupils who were average or gifted; slow learners through the gifted were present in about 13 per cent of them. Senior high home economics classes were more homogeneous in ability. The percentage of courses having a range in scores of 25 points or less was: 13 per cent in first-year homemaking; 20 per cent in second-year homemaking; and 40 per cent in third-year homemaking. Waag attributes the greater homogenity in ability levels in these classes to the fact that high school home economics courses are elective and, hence, selection influences range of ability.

The advantages and disadvantages to the homemaking program in the use of home economics advisory groups as seen by teachers and administrators in Illinois public schools were explored by Ramsey (1962). Replies to a questionnaire were obtained from 53 teachers and administrators who had advisory groups in their schools and 68 teachers and 58 administrators who did not have them. Both sets of respondents agreed that greatest contribution of the home economics advisory board was in the area of planning and organizing the adult education program. Teachers believed the greatest problems associated with them were: obtaining suitable members; the utilization of too much time in proportion to its contribution; and lack of familiarity with criteria for the selection of suitable members. Administrators were fearful that advisory boards might exceed their authority.

Studies of the needs of teachers have implications for both in-service and pre-service programs. An investigation of beliefs and practices of 65 Nebraska vocational homemaking teachers regarding evaluation was done by Briggs (1960) using an inventory of beliefs and a questionnaire of practices. Three statements of beliefs were accepted by all of the teachers; two related to grading and one to the need for continuous evaluation. Ninety per cent disagreed with four statements; two concerned grading and two pupil participation in evaluation. There was some discrepancy between beliefs and practices relating to two statements. All teachers agreed that in order for grades to be meaningful to pupils and parents, they need to know upon what bases they are assigned but only 36 per cent reported that they informed the parents about bases. Although 61 per cent of the teachers rejected the statement that the normal curve was the best basis for

assigning grades, 21 per cent reported they used the curve. Only 76 per cent indicated that they were collecting evidence about attitudes and many were not defining their objectives in terms of the behaviors expected of the students as a basis for evaluation.

Rader (1961) secured responses from 94 per cent of the 36 first- and second-year teachers in Nebraska. The professional activities with which these teachers recognized the most need for help were those associated with the selection of textbooks and equipment, the management of the physical facilities of the department, and extra-class activities such as the home experience program and FHA. Workshops and conferences were selected as the kinds of in-service activities best suited to contributing to the solution of problems faced by these teachers.

Scott (1961) collected data from a group of married homemaking teachers who had entered or re-entered homemaking teaching after a period of five or more years, Group I, and from married teachers who had been teaching homemaking continuously for five or more years, Group II, in eight states in the Southern region. More teachers in Group I than in Group II reported difficulty in: directing FHA activities; evaluating the effectiveness of the homemaking program; finding time for making home visits; and planning the home experience phase of the program. Teachers in both groups had difficulty in: planning the adult program; working with pupils of different abilities in one class; planning the department budget; using the problem-solving method; and using essay tests. Other problems were inadequate equipment, funds, and library facilities. Group I suggested the following ways in which state supervisors and college or university

faculties could help: small study groups; sectional meetings at state conferences devoted to their needs; initial visits from the supervisor early in the year; extension classes; and summer classes of two or three weeks.

Coon's investigation (1962) also indicated some supervisory problems. Responses to a questionnaire were sought in early 1959 from a stratified random sample of 4,303 public junior and senior high schools in the United States; replies were obtained from 92 per cent. Home economics were being offered in 95 per cent and 49 per cent of the total number of girls in them were enrolled in home economics courses that year. In the eighth grade, 73 per cent were enrolled whereas in the 11th grade only 28 per cent. Of the total number of home economics courses offered in these schools, 46.1 per cent were vocationally subsidized courses. In both the vocational and nonvocational courses below the 12th grade, approximately one-half to three-fourths of the course time was devoted to studying the areas of foods and clothing. In the 12th grade, however, the course time was almost equally divided among eight areas: child development, clothing, consumer education, family relations, foods and nutrition, health and home nursing, housing, and management. Approximately 25,050 home economics teachers assumed the responsibility for the programs in these schools; 82 per cent were full-time teachers, the other 18 per cent assumed some other school assignments.

The methods used by homemaking teachers to keep abreast of trends and developments were investigated by Garst (1960). The 104 homemaking teachers in the public schools of four counties in Southwestern Ohio indicated that their best sources of help were professional magazines,

commercial literature, and up-to-date textbooks. Professional meetings, personal contact with experienced homemaking teachers, workshops, and materials distributed by the state office were also considered helpful. Over half, many of whom were mothers of pre-school and school children, indicated that family responsibilities hindered their professional advancement. A heavy teaching and extra-curricular load, financial problems, and distance from a university also interferred with keeping up to date. The types of helps which the teachers believed most useful were workshops, bibliographies, monthly newsletters, and a yearly summarization of trends and ideas.

In an effort to determine the effect of supervision on the balance of the high school home economics curriculum, Thomas (1965) analyzed teachers' responses to the questionnaire sent out by the U.S. Office of Education for the 1959 national study. She determined the amount of class time devoted to specific subject-matter areas in the first two years of home economics in 502 four-year high schools. Of this number, 381 had supervisory programs administered by the state or city. Balance in the curriculum was defined as a proportionate distribution of annual class periods among the various areas of home economics subject matter, or more specifically that approximately one-fourth to one-third of the annual class periods should be devoted to each of three groups: Group A, child development, family relations, management, and consumer education; Group B, foods, health, and home nursing; and Group C, clothing, housing, and related areas of home economics subject matter. No significant difference was found between the emphasis in courses offered during the first two years in the supervised and unsupervised four-year high schools. There was

some evidence that there is a relationship between the distribution of curriculum materials and teacher involvement in the preparation of such materials and the number of offerings involving Group A. There appeared to be no association between balance in the curriculum and three factors: the ratings which supervisors gave curriculum development activities, the amount of supervisory time devoted to them, or the proportion of time devoted to these responsibilities by supervisors.

In Michigan, the report of the Committee of the Vocational Education Evaluation Project (1963) described their non-credit program for teachers and the results of a teacher evaluation. Two-thirds of those attending annual state conferences rated them as "very valuable"; approximately one-third rated fall meetings as having "considerable value." Although fewer teachers had participated in meetings sponsored by one of the colleges, there was a relatively high level of satisfaction reported. The Committee recommended continuation of these programs and suggested that other vocational education areas "emulate" home economics education in this respect.

EVALUATION

Research in this area relating to the secondary home economics program includes assessing present programs as a base for future development; determining effects of instruction and self-evaluation; devising instruments to aid in the assessment of the degree to which objectives are being accomplished. Evaluation of pre- and in-service programs is included in the sections on Teacher Education and Administration and Supervision.

After a panel of consultants had reviewed programs in vocational education for the U.S. Department of Health, Education, and Welfare (1963), they made several recommendations, one of which related to evaluation. Noting the paucity of data to evaluate the program, they recommended that all agencies having a responsibility for vocational education use a variety of criteria to measure the effectiveness of local and state programs in all areas. They also saw a need for unique homemaking programs for girls in disadvantaged families in large cities and for more wage-earning programs using home economics skills and knowledge.

A Committee in Michigan (1963) made a comprehensive evaluation of their total vocational education program. Three of their recommendations relating to home economics education were that some attention be focused on wage earning even though the primary purpose of the secondary program is to prepare for home and family living, that high priority be given to the development of research competence among the leaders, and that funds be used to support research.

Five states are cooperating in a project to evaluate two types of secondary programs but the reports of only three are presently available. General homemaking courses and specialized courses were compared by asking seniors to indicate on a questionnaire the amount of help they had obtained from their high school program relative to 53 topics and also their desire for additional help. General courses were defined as those made up of units from at least three areas of home economics and specialized courses as those which focused mainly on one area such as management, child development, or food and nutrition. The questionnaire was revised after test-retest

reliabilities for the eight areas of subject matter were found to vary from 0.74 to 0.96. The total was 0.87 on the section relating to amount of help and 0.92 on desire for additional help.

In the Indiana study of 371 senior high school students, Lowe (1962) found no significant differences between the amount of help recognized by girls who had taken home economics in a general type program and those who had taken specialized courses when the amount of homemaking instruction, socio-economic status, and academic competence were controlled. Significant relations were found, however, between the amount of help and the amount of instruction. Garrett (no date given), using a sample of 233 pupils in Missouri, and Ray (no date given), a sample of 375 in Pennsylvania, found differences between type of program but they did not favor the same type. In the former, students more commonly recognized help from the general type, whereas in the latter the students in the specialized type recognized help more frequently. Type of program was related to desire for additional help: those in the general program more frequently indicated this desire in Indiana but in Missouri the reverse was found to pertain.

Blackwell, Nelson, and Jacoby (1966) reported the effectiveness of a pilot program in training students for entry-level jobs in food service. Interviews with the 14 girls completing the course indicated unanimous approval. An index of student success was computed by ranking students according to their scores on five instruments developed by the investigators: Becoming Employable Scale, Waitress Scale, Caterer Scale, Attitudes Toward Work Scale, and a final achievement test. Significant relationships were found between the index and

IQ, academic rank in class, and total hours of work experience but not between the index and socio-economic status or the total score on a motivation questionnaire.

Five studies are concerned with evaluating instruction in some aspect of home economics. Whitehead (1960) presents data collected from 445 subjects to determine the effect of nutrition education upon food choices. Pupils from sixth- and seventh-grade classes were divided into two matched groups: an experimental and a control group. Students in the sixth grade participated in the educational program two years; those in the seventh grade, one year. The data indicated that while general eating patterns were maintained by both the experimental and the control groups after one year, intakes of the 10 food classes by pupils in the experimental more nearly approached recommended levels than did those in the control groups. The participants in the two-year nutrition education program showed greater improvement in eating patterns than those in the one-year program. Also, there was considerable difference between the eating patterns of the two groups one year after the two-year educational program.

The value of a special clothing course in attracting and holding the more academically-able student in home economics was explored by McCormick, Shelden, and White (1966). The course was adapted from 11 units of the regular clothing course; four of the units were enriched, the remaining seven were unchanged. In addition, the experimental course was scheduled to meet for one hour rather than two. Nineteen students were enrolled in the special course and 21 students in the regular course. Progress was determined during the semester by the use of unit tests, notebooks, weekly-grade contracts, garment

construction, and projects. The students in the experimental course maintained a higher degree of interest throughout the semester and produced a satisfactory quantity and quality of work in a shorter class period. The authors believed that such courses will attract and hold gifted students.

A six-week unit on family relations was evaluated by determining the changes in marriage role expectations of high school adolescents. Jackson (1963) assessed changes by two administrations of the Marriage Role Expectation Inventory by Dunn (1960) to experimental and control groups. The former were enrolled in a course containing a six-week unit in family relations and the latter had no exposure to such a unit. Forty students participated in each group; they were similar in age, grade level in school, religion, suburban area, and all lived in the South. The post-test data from the experimental group showed significant differences in median scores on the total inventory and four subscales, whereas the control group had non-significant differences except in the subscale related to homemaking.

Curtis (1961) studied the effect of a six-week unit in marriage and family living upon the attitudes of 28 10th-grade girls toward marriage and family living. Changes in attitudes were assessed by two administrations of a 32-item attitude scale developed by the investigator. "Major" changes occurred on 12 of the 32 items; these items related to the desirability of a similar amount of education and common interests by marriage partners; faithfulness of the mates; wife having an allowance for personal and household expenses.

The effect of student self-evaluation upon achievement was investigated by Crowe (1965). Experimental and control classes were

set up; the former contained 15, the latter 14 seventh-grade pupils. The students had similar characteristics such as intelligence, socio-economic status, and self-concepts. Treatment of the experimental group differed only in the use of self-evaluation devices in a unit focusing on management in food preparation. Groups were pre- and post-tested using a multiple-choice test devised by the investigator. A comparison of the median gains showed that the experimental class gained twice as much as the control class; however, the former did not gain more than the latter when mean gains were compared. Thus, the effect of self-evaluation upon achievement is not clear. Crowe suggested this may be due to the small sample size or the lack of refinement of the instrument used to assess achievement.

Nine studies are reviewed which had as one of their major objectives the development of an instrument or a battery of evaluative instruments.

To develop an instrument for use by high school girls and teachers to assess the picture the student holds of her self-discipline, Kilpatrick (1961) studied four aspects of self-discipline: Becoming More Neat and Orderly; Becoming More Trustworthy and Dependable; Starting Things on My Own; and Finishing What I Start. A Q-sort of 80 statements was used by students, adults, and peers to delineate self-discipline. The girl's opinion of her self-discipline was compared with that by peers and adults; their responses tended to yield higher scores than those which girls gave themselves. Test-retest reliabilities of the students' sorts were 0.70 using the Pearson product-moment formula and 0.93 using the Kuder-Richardson formula.

Reed (1960) attempted as part of a larger study to devise a reliable criterion for measuring self-reliance in youth by combining ratings by self, parents, and teachers. She adapted Stott's inventory, Every-Day Life, which is a scale for the measurement of self-reliance, and obtained three instruments: Parent-Rating Inventory, Self-Rating Inventory, and Teacher-Rating Inventory. Responses were obtained from a random sample of 460 ninth-grade pupils from six junior high schools in New Mexico. Data from the three inventories were intercorrelated to determine whether they could be combined into a single criterion but the correlations indicated that combining scores from the three were not desirable.

In the construction of an instrument to measure attitudes toward money, Miller (1965) developed 85 attitude items and divided them into seven scales based on predetermined operational definitions. When responses of 225 boys and girls 16 and 17 years of age were analyzed, five of the seven scales proved to be acceptable for use in measuring group attitudes toward money: Democracy, Value and Goals, Satisfaction and Happiness, Budget, and Action Orientation. The reliability coefficients were between 0.57 and 0.76.

Keenan (1962) constructed an instrument designed to help students understand how various ways of spending can reflect the values held by an individual or family. The inventory consisted of 14 case problems, each describing a situation which required a choice among alternative ways of spending money. Reaons for the choices were keyed to one of seven selected values. Respondents assigned ranks to each reason to indicate their assessment of relative importance. Although the analysis of the responses of approximately 2,000 pupils

in family living classes in Illinois showed some commonness of pattern, the inventory did differentiate successfully among three groups, girls, boys, and home economics teachers, with respect to the values of recreation, education, beauty, health, relationships, and thrift.

A measure of the willingness of 12th-grade girls to perform homemaking activities involved in the role of homemaker was developed by Zachary (1962). Items were based upon activities identified by a group of 80 homemakers in Florida as common to the role of homemaking. Analysis of the responses of 110 12th-grade girls to the instrument indicated that 88 of the 94 items in the instrument yielded satisfactory reliabilities but only 37 were found to discriminate satisfactorily between high and low criterion groups.

Ross (1965) sought to develop two tests to accompany the self-instructional program on the use of the sewing machine developed by Moore (1963) and Shoffner (1964). One was a performance test; the other, a paper-and-pencil test involving matching and multiple-choice types of items. Inter-judge reliabilities of three judges were 0.91, 0.92, and 0.95 on the former. The split-half reliability of the latter was 0,82. Item analysis revealed the need for some revisions in both tests.

Corns (1965) attempted to develop a multiple-choice type of test to measure the level of conceptualization which pupils had attained in clothing selection. After identifying 135 concepts relating to physical characteristics, management of resources, and psychological satisfactions, she selected 40 dealing with design elements and developed a multiple-choice test using the definitions given by Iowa pupils. The choices represented different levels of conceptualization.

The respondents were to select the best description of the concept and also to indicate all other responses that were correct. To validate the test a parallel essay test was constructed. When both were administered to the same students, a correlation of 0.57 was obtained between the scores; hence, the multiple-choice test appears to be an unsatisfactory measure. Since the multiple-choice form yielded higher scores, it was assumed that pupils were able to recognize a higher level of conceptualization than they were able to verbalize.

To aid teachers in estimating the clothing construction ability of junior and senior high school pupils, Frandolig (1962) revised and validated two batteries of instruments and developed weighted scores for each. These consisted of two forms of a paper-and-pencil test, Clothing Construction, a Finger Dexterity Questionnaire, and Miller's Survey of Object Visualization. The criterion measures were two rating scales used by teachers in six schools in Iowa who observed and rated the skills and practices and also made a general estimate of construction ability of 392 pupils in their classes. Intercorrelations were obtained among the scores on the three predictors and the three criteria measures and regression equations were developed for predicting the ability of eighth-, ninth-, 10th-, 11th-, and 12th-grade pupils. Also, tables of weighted scores and means of interpreting estimates into three ability levels were developed for each grade.

An Attitudes Toward Work Scale has been developed by Blackwell, Nelson, and Jacoby (1966). The preliminary form was composed of 69 direct quotations from an open-end questionnaire administered to 106 boys and girls in New York State. An item analysis reduced the scale

to 49 items which involves attitudes toward the following: adequacy of school preparation for work, supervision, peers, choosing a job, rights and responsibilities of employees, inner-satisfactions of working, and expectation of future advancement. A split-half reliability of 0.87 and a test-retest reliability of 0.72 were obtained. The distribution of scores of 155 students approximated a normal curve. Rating scales also were developed for use in determining general employability, skill as a waitress, and as a home caterer. Teacher and self-ratings yielded correlations of 0.70, 0.47, and 0.11, respectively.

RESEARCH

Although the amount and the quality of research relating to home economics education are increasing, the need to improve both is clear. One avenue is through cooperative effort either within a university or among institutions. Some of the advantages and problems as well as the steps taken in such a venture are described by Coon (1962) and Coon and Ford (1962). Since such a large proportion of the research in the field is carried on by graduate students, Lehman (1960) has made two pertinent suggestions relating to students working toward the master's degree: (1) that all institutions require a thesis for the degree and (2) that several students cooperate on the solution to a problem by each studying one aspect or sampling a different area of the population.

In any field, two very important factors influencing quality of research are the number of qualified personnel and the instruments available for data collection. Considerable progress is evident with

respect to both in recent years. Space does not allow a listing of all research instruments developed in the past few years but a few are pointed out as illustrative.

In the area of curriculum for general education these inventories used by Moore and Holtzmann (1965) are worth consideration: Attitudes Toward Personal and Family Living, Concerns and Problems in Personal and Family Living, and Interests in Personal and Family Living. Others include Dunn's (1960) Marriage Role Expectations, Brown's (1964) My Ideas About Family Living, Petrick's (1965) What Do You Believe About Families?, Jeske's (1963) What Do You Do With Young Children?, Ferguson's (1964) Questions I Have About Little Children, Schwieger's (1966) My Experiences in Family Housing, and Mean's (1964) Experiences With Food.

Several tests and inventories that can be useful in assessing programs at the secondary level have been developed. In addition to some of those referred above, such as Petrick (1965) and Dunn (1960), are these: Miller's (1965) scales on attitude toward money, Zachary's (1962) Acceptance of the Role of Homemaker, Frandolig's (1962) batteries to predict clothing construction ability, Corn's (1965) test of concept attainment in clothing selection, Ross' (1965) performance test and multiple-choice test on the sewing machine, Byrd's (1963) What Do You Know About Children? and Concepts in Child Development, Roth's (1963) Knowledge Test, Spangler's (1963) Critical Thinking Test in Family Relations.

Only a bare beginning has been made in developing instruments for use in wage-earning programs. Blackwell, Nelson, and Jacoby (1966) have four instruments: Becoming Employable Scale, Attitudes Toward

Work Scale, Waitress Scale, and Caterer Scale. Loftis (1966) also has developed a scale, My Future Plans.

Illustrations of instruments that relate to teacher education include Cooper's (1962) test to measure ability to apply educational concepts, Osborn's (1960) inventory to determine value patterns, Loftis' (1962) Measure of Professional Commitment, Brigg's (1960) What Are Your Evaluation Practices? and Inventory of Beliefs, Lehman's (1962) Just Suppose Inventory, Ford and Hoyt's (1960) Criteria of Classroom Effectiveness for Homemaking Teachers and three high school teacher attitude inventories.

Unfortunately, many of these evaluative instruments are in need of revision after their preliminary trial. Following that state and national norms should be established for most effective use.

In addition to the need to develop and improve research instruments, it is obvious that in most areas much is yet to be done in finding solutions to our educational problems. Replications of studies are needed as well as investigations directed at relatively unexplored aspects. Only examples of some of the pertinent needs can be included here. A few states have made systematic studies basic to curriculum development for homemaking programs at the secondary level and at several institutions' projects relating to wage earning are now underway. Pilot studies are infrequent but are needed to explore new ways of teaching or organizing learning experiences to meet common or special needs. A few have been concerned with programs for special groups such as handicapped or high-ability pupils. As far as evaluation of state programs is concerned, little progress has been made.

Needed investigations relating to wage earning are illustrated by those pointed out at a national conference on food service called by the United States Department of Labor (1964). Doubtless these same needs are applicable to other wage-earning areas. Some of those listed were job identification, recruitment, selection of workers, qualifications for instruction, motivation of employees to greater productivity and upgrading, occupational mobility within the industry, labor-market practices, knowledge and abilities required for selected jobs, nature and extent of technological change in the industry, job descriptions and staffing patterns, attitudes toward employment in the industry and means of improving the attitudes, follow-up of graduates of training programs, vocational potential for disadvantaged youth, effective matching of people and jobs, testing of methods of training for clusters of occupations, factors affecting the types of applicants for jobs, and worker-traits conducive to success.

Recent publications which include recommendations concerning needed research or questions toward which research could well be pointed are: Simpson (1965), Anthony (1965), Hurt (1966), Christian (1963), and Chadderdon (1964).

As the amount of research data increases, the need for a system of storage and retrieval of information becomes increasingly essential if needless duplication of effort is to be avoided and if educators are to make the best use of the findings. Curry (1965) explored a possible system for the entire field of home economics by first establishing guidelines from a review of the literature pertaining to such systems. Following this, she developed a plan and evaluated it by having it used

by 21 non-trained persons to obtain information from several theses in the area of home economics education.

The U.S. Office of Education has established the Educational Resource Information Center (ERIC) in Washington, D.C., which is responsible for making available the public findings of Research supported by the Office of Education through Bureau of Research. ERIC also currently includes decentralized clearinghouses, each focused on a separate subject-matter area. The Center for Vocational and Technical Education in Columbus, Ohio, includes in its activities the Clearinghouse on Vocational and Technical Education. Home Economics Education is an important field within the focus of this Clearinghouse. Research documents and other materials will be available through the system in the form of microfiche or reproduction copy. This should prove to be a valuable resource to researchers in Home Economics Education.

CONCLUSIONS AND RECOMMENDATIONS

During the reviewing of the research in home economics education since 1959, two generalizations became clear: (1) considerable progress has been made in collecting and analyzing data relating to important problems and (2) there is great need to use resources to better advantage.

The first of these is documented by the research included in this review. The second comes, in part, from the large number of theses, particularly in curriculum, which are based on one school system. Useful as these may be locally, they contribute little to the whole. If institutions or states developed an over-all plan for sampling a

state or region, then studies by students could fit into the plan and make a greater contribution. Since in many institutions most of the research is that carried on by graduate students, making these more effective is very important. Another resource which needs to be used to a greater extent is statistical consultation and analysis. Although the sophistication level of several studies is relatively high, generally this is not true. Recognizing that statistical analyses are not appropriate in some types of investigations, they are sorely needed in others. Many resort to percentages as the only means of summarizing data when tests of significance are needed. Most researchers doubtless recognize that one or two courses in statistics do not a statistician make and so depend heavily on consultants. Fortunately such resources are now available in many colleges and universities. Another resource which probably needs to be tapped, particularly in wage earning, is the experience of researchers in other areas of vocational education.

Two additional suggestions for improvement came from this review experience. Theoretical bases are lacking in many of the research reports and often assumptions are involved which are not adequately examined for validity. Theories also need re-examination as research findings in education, psychology, and sociology become available. Relatively few studies were found in which new approaches were tried. The need for greater creativity is clear, leading to exploratory studies as the first step in finding solutions to important problems.

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