

AN IDENTIFICATION OF COMPETENCIES IN  
BEGINNING CLOTHING CONSTRUCTION  
FOR COLLEGE LEVEL

By

KEREN PAYNE MILLER  
"

Bachelor of Science in Education  
Southwestern Oklahoma State University  
Weatherford, Oklahoma  
1959

Master of Teaching  
Southwestern Oklahoma State University  
Weatherford, Oklahoma  
1966

Submitted to the Faculty of the Graduate College  
of the Oklahoma State University  
in partial fulfillment of the requirements  
for the Degree of  
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Thesis Approved:

Elaine Jorgenson  
Thesis Adviser

Bronwyn Sisler

Ruth Tastle

Wm. D. Frazier

D. D. Duka  
Dean of the Graduate College

938636

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## CHAPTER I

### INTRODUCTION AND SIGNIFICANCE

The home economics program in most institutions of higher education serves a triple purpose; education for personal development, for family living and for professional specialization. The home economics program provides professional curricula for further education in the various phases of home economics or for specialization in one or more areas of home economics and is supported by study in related fields.

Educators at the college level are continually seeking to improve the teaching-learning process. The trend toward the development and adoption of competency based education is one of the rapidly expanding and probably most significant movements in education today (Briggs, 1972). Competency based education is based on identified competency requirements within the course and its purports to allow the student the freedom to select his own goals (Young and Mondfrans, 1972). Klingstedt (1972) stated that competency based education is based on the specification or definition of what constitutes competency in a given field. Usually much research is considered, when available, before competency levels are identified. The way in which the agreed-upon level of competency is communicated is through the use of specific behavioral objectives for which criterion levels of performancy have been established. Once the

required behaviors have been specified, they are placed in a hierarchy leading from simple to complex, and then an instructional sequence is planned that will help the learner achieve the desired behaviors. When the learner is ready, a test or check of some sort is administered to determine if the required level of competency has been achieved (Klingstedt, 1972). Young and Mondfrans (1972) stated that competency based education involves high risks because of reduced teacher direction and increased student control but the rewards are great. Competency based programs, emphasizing objectives and personalization, focus on the needs and accomplishments of the student (Houston and Howsam, 1972).

An effective curriculum is well balanced and functional. Home economics is a broad field involving many areas of subject matter and a wide variety of experiences. One of these areas is clothing. Students need valid and up-to-date information in beginning clothing construction for preparation for their future careers whether it be in teaching, extension, business or homemaking. They need exposure to current materials, not mere repetition, and an opportunity to proceed at their own pace.

The evaluation of home economics programs throughout the United States is one of the goals of the American Home Economics Association. This association has long been concerned with accreditation and during the last five years much emphasis has been placed on curriculum evaluation (A.H.E.A., 1970).

This attempt to identify the clothing construction competencies can contribute to improvement of the teaching-learning process by identifying the content in beginning clothing construction at the

college level. The findings of this study can be used as a basis for recommending the implementation of competency based education and for evaluating present courses in preparation for American Home Economics Association accreditation.

#### Statement of the Problem

The problem of this study was to identify the clothing construction competencies to be included in beginning college clothing construction. Upon proper identification of these competencies recommendation can be made for the implementation of competency based education at the undergraduate college level of clothing construction.

#### Purpose of the Study

The purpose of this study was to define or identify the competencies which should be included in beginning clothing construction at the college level. These clothing construction competencies could be used as a basis for recommending implementation of competency based education.

Identification of these competencies can provide information as a basis for evaluating the present clothing courses and to enrich and strengthen them. The junior colleges might find the competencies identified as important criteria in measuring and evaluating their present clothing construction courses in preparing their students to transfer at the termination of their training at those institutions.

### Objectives of the Study

The objectives of this study were to:

1. Develop an instrument for identifying the clothing construction competencies in a beginning college clothing construction class considered important and essential by a group of educators knowledgeable in clothing construction.
2. Analyze the relationship of the responses of each group for each competency.
3. Use the information from the analysis to develop a list of competencies for recommending implementation of competency based education in the beginning clothing construction curriculum at institutions of higher education.

### Procedure

The following steps were taken in conducting the study:

1. The researcher examined literature related to the areas of clothing and textiles, goals and objectives of education, competency based education, and curriculum design which provided rationale for the study.
2. A questionnaire was developed to identify suggested beginning clothing construction competencies. The questionnaire included a list of clothing construction competencies selected from textbooks, journals, and suggestions from educators. The respondents were asked to check those competencies that they believed essential in beginning

clothing at the college level. They also had the opportunity to place the competency under "other courses" or "not important to learn" and they could add other competencies not listed.

3. For purposes of validation, the questionnaire was pre-tested by educators in the clothing and textiles department at Southwestern Oklahoma State University in Weatherford, Oklahoma, and secondary homemaking teachers from the West Sub District II in Oklahoma. Necessary revisions were made as a result of the pretesting.
4. Selected educators were mailed a copy of the questionnaire with a cover letter requesting their participation. The educators were selected from the following groups:
  - a. Educators from the Southwest region of the United States. This included clothing specialists in extension, state and district supervisors in home economics education, secondary homemaking teachers and state college professors.
  - b. Eleven educators from the ten universities with the highest enrollments in Colleges of Home Economics as identified in the McGrath report.
  - c. Companies which hire educational representatives to demonstrate and/or promote products used in clothing construction.
5. The data were analyzed by figuring percentages of the responses of the total group and rank ordering the responses for each group.

### Assumptions

The following assumptions were made concerning this study:

1. Opinions of a panel of judges who are professional in the field of clothing and teacher education can serve as resources in identifying the desirable competencies to be incorporated in beginning clothing construction.
2. Competencies identified for inclusion in beginning clothing construction can help in the design of a model for implementation of competency based education.
3. Competencies identified for inclusion in beginning clothing construction can provide information for a self study evaluation proposed by American Home Economics Association accreditation.

### Definition of Terms

The following operational definitions were used in the study:

Clothing construction: techniques involved in making wearing apparel (Good, 1959).

Competency: a behavioral outcome of the educational preparation that the individual should attain and which is considered essential for the performance in a given class (Burns, 1972, Klingstedt, 1972, Young and Mondrans, 1972).

Competency based education: education based on identified competency requirements within a course allowing the student to select his own goals and proceed at his own pace. When the learner is ready, a test of some sort is administered

to determine if the required competency has been achieved (Klingstedt, 1972).

Curriculum: a systematic group of courses required for graduation in a major field of study (Good, 1959).

Group of educators: clothing personnel in teaching, supervision and extension in Southwest Region of the United States. Clothing personnel in business and universities throughout the United States.

A.H.E.A.: American Home Economics Association, a national organization established in 1909 to provide opportunities for professional home economists and members from other fields to co-operate in the attainment of the well-being of individuals and families, the improvement of homes and the preservation of values significant in home life (New Directions, 1959).

### Limitations of the Study

This study was limited to an investigation of the clothing construction competencies needed by students in the beginning clothing construction pursuing a bachelors degree in Home Economics and Home Economics Education. The questionnaire was designed to include only competencies to be included in the beginning clothing construction course.

### Organization of the Study

A review of related literature will follow in Chapter II. The formulation of the questionnaire and methodology for the study are

described in Chapter III. Findings of the study are presented in Chapter IV: and the conclusions and recommendations are presented in Chapter V.

## CHAPTER II

### BACKGROUND FOR THE STUDY

#### Introduction

The rapid technological and scientific developments within the past fifty years have caused a drastic change in society's attitude toward education and employment of women. The profession of home economics has been much involved in this matter. Home Economics has had as its main purpose service to society through providing training basic for the attainment and maintenance of the well being of individuals, families, and homes, and the preservation of values significant in home life (A.H.E.A., 1959).

In an address to the Sixty-First Annual Meeting of American Home Economics Association Knoll (1971) stated, on page 89:

It is my contention that home economics educators today can exercise considerable choice in identifying goals, in setting the level of course offerings and in selecting the methods most likely to produce the desired learnings.

Assuming that the right to choose is a necessary condition in democracy, it may be said that home economics teachers are moving into an increasingly democratic professional period.

The first part of this chapter includes a discussion of curriculum development concepts, establishing goals and objectives and competency based education. Recent studies pertinent to this study in clothing, textiles and merchandising departments are also included.

### Core Program

The American Home Economics Association accreditation committee believes that a core program in home economics is essential (1965). The idea of the core is not new. According to Lee and Dressel (1963) the earliest curriculums included foods, clothing, sanitation and care of the home. Later, child development, family relationships and family economics were added for all students.

With the advent of professional specialization the idea of a common segment of courses in the curriculum remained. The core may be justified on at least three grounds, according to Dressel (1968). The first is that home economics is closely identified with education for women. Second, our primary professional goal is to strengthen family life. This is basic to all specialities within our profession. The third justification is that home economics must be a unified profession despite specialization. All home economics students must be adequately grounded in the essentials basic to wholesome family living. They should have sufficient knowledge of every aspect of their profession in order to operate effectively as home economists.

Home economics is an applied field. Dressel (1968) stated that the concept of an applied field of knowledge means roots in or built upon a segment or segments in the basic disciplines. Home economics draws its fundamental knowledge from the physical, biological, and social sciences; the arts; and the humanities. Not only are the concepts of these basic fields utilized but the new concepts emerge in home economics as well as new principles and new syntheses of knowledge. Dressel pointed out that this broad base contributes to the uniqueness of home economics. He also suggested that one

emphasis of the core might include professional ideals, attitudes and historical developments as well as ethical considerations.

The field of home economics, like many other education fields, is experiencing a vast expansion of knowledge. The number of teachers available and the classroom time available have not increased proportionately. Educators have been conducting research to develop newer and more efficient methods to aid student learning in order to prevent the elimination of valuable subject-matter from the curriculum.

### Curriculum Development

As cited in the definition of terms a curriculum is a systematic group of courses required for graduation in a major field of study. Dressel (1968) stated rather than using the limited definition of the word it should be extended to include more than independent courses in order to provide a unified experience. Taba (1962) considered the curriculum a plan for learning, consisting of goals for learning and ways of attaining these goals.

In a publication by Barlow, Director of the Division of Vocational Education, University of California (1969) he stated the curriculum is the sum total of learning experiences for which the school has the responsibility. Taba (1963) listed the order in which decisions are made in developing a curriculum. This list of steps which follows is comparable to a sequence proposed in a syllabus by Tyler (1950).

- Step 1: Diagnosis of needs
- Step 2: Formulation of objectives
- Step 3: Selection of content

- Step 4: Organization of content
- Step 5: Selection of learning experiences
- Step 6: Organization of learning experiences
- Step 7: Determination of what to evaluate and of the ways and means of doing it (Taba, 1962)

Tyler (1968) stated to plan a curriculum means to select, arrange, and sequence these experiences, through the joint decisions of teachers and learners, so that successful learning takes place. These decisions must take into account at least four major determinants: (1) the nature and needs of our society, (2) the nature and needs of the learner, (3) the philosophy of education and (4) the psychology of learning.

Taba (1963) stated that all curricula, no matter what their particular design, are composed of certain elements. A curriculum usually contains a statement of aims and specific objectives; it indicates some selection and organization of content; it either implies or manifests certain patterns of learning and teaching whether because the objectives demand them or because the content organization requires them. Finally, it includes a program of evaluation of the outcome. Taba (1962) also stated in our society the factors for curriculum building are the learner, the learning process, the cultural demands, and the content of the disciplines. Scientific curriculum development needs to draw upon analyses of society and cultural studies of the learner and the learning process, and analyses of the nature of knowledge in order to determine the purposes of the school and the nature of its curriculum.

An important aspect of selecting curriculum materials in home economics has been based on the theory that the identification of 'basic concepts and generalizations provides valuable resource

materials for curriculum building. According to Alexander (1966) a curriculum that is structured on unifying concepts is flexible and can be chosen from among a wide range of possibilities. The identification of concepts and generalizations should facilitate the evaluation of the student learning process.

One of the plans for action presented at the 1971 annual meeting of the Textiles and Clothing Section of A.H.E.A. was to investigate the need for establishing concepts and generalizations for higher education in textiles and clothing. A committee has been organized and is currently at work (71-72 A.H.E.A. Activities, 1972).

### Objectives

Essential steps in curriculum building are deciding upon the objectives of the program, determining the learning needed to achieve the objectives, selecting the types of experiences for attaining this learning, and setting up the means for measuring growth in learning. Curriculum building takes its direction from the philosophy of the persons responsible for a particular program. The objectives of a curriculum should be clearly defined. Criteria for evaluation of objectives are the following:

1. Objectives should be consistent with the philosophy and general purposes of the institution and of home economics.
2. Objectives should be concerned with the personal needs of the students and their relationships with family and community groups.
3. Objectives should be in line with research findings concerning the psychological and social needs and interests of students; their ideals, appreciations, attitudes, abilities, and habits; and the conditions, responsibilities and opportunities of contemporary life.

4. Objectives should be expressed in operational terms; they should be selected in terms of their importance in living and of the resources available for attaining them.
5. Objectives should be interpreted in terms of the learning needed for their achievement (Dressel, (1968)).

Krathwohl (1964) stated, on page 23:

If affective objectives and goals are to be realized, they must be defined clearly; learning experiences to help the students develop in the desired direction must be provided . . .

He further believed there was an apparent need for identification and classification of objectives in the affective domain to implement the research in the cognitive domain so that effective evaluation can be made. The kinds of objectives most commonly written by teachers are statements of broad instructional purpose. The verbs in these statements usually are know and understand for the cognitive area and appreciate, value and believe for the affective area. These terms are useful for some purposes, but their lack of precision and variety of possible interpretations create problems in determining the success or failure of learning and teaching efforts.

### Behavioral Objectives

A behavioral objective is a goal for, or a desired outcome of, learning which is expressed in terms of observable behavior or performance of the learner (Mager, 1962). The use of behavioral objectives may serve several functions:

1. To identify those student behaviors which correspond with a given set of content or process materials in a curriculum and to guide instructional planning to achieve these behaviors;

2. To provide criteria for the selection of learning experiences;
3. To provide a means of evaluating the outcomes of any instructional experience;
4. To provide criteria for analysis and revision of learning experiences in terms of the original or newly discovered objectives (Montague and Koran, Jr., 1969).

The above information indicates the purpose of behavioral objectives. These objectives are an essential element in competency based education.

### Competency Based Education

A significant movement in education today is the trend toward the development and adoption of competency based education (Briggs, 1972). The concept of competency based education has emerged from the emphases on goal-orientation and individualization.

Competency is knowledge, skills and judgment which the student will demonstrate at a predetermined proficiency level before initial and/or continuing certification (Competency or Performance Based Instruction, 1971). Klingstedt (1972) stated that competency based education is based on the specification or definition of what constitutes competency in a given field. The way in which the agreed-upon level of competency is communicated is through the use of specific, behavioral objectives for which criterion levels of performance have been established.

Burns, (1972) stated the most striking feature of competency based education obviously is competency, which is synonymous with the concept of ability. At the end of instruction, in competency

education, the learner is to have acquired the ability or skill to do--do something--since doing is the essence of learning. Burns (1972) stated some educators distinguish between performance based education and competency based education while others use the terms interchangeably. When a distinction is made, it usually involves interpretation of performance, meaning the "presence of a behavior," while competence means " the behavior plus some additional standard," which implies performing well.

Dressel (1968) defined competencies in proposing his seven competencies of the undergraduate curriculum in higher education. He clarified his educational philosophy by stating that in his writing the end results of education have been defined as competencies to be acquired by students. He viewed these seven competencies as objectives of education but contended that by stating them as student competencies, their inferred operational role is clarified. By using a precise statement of what the student was expected to do, Dressel was able to clearly indicate what experiences were necessary to provide practice. One of the seven competencies identified by Dressel is career oriented:

The recipient of the baccalaureate degree should be qualified for some type of work. He should be aware of what it is and he should have confidence in his ability to perform adequately (Dressel, 1968).

Learning goals or objectives can be made explicitly by and for the learner. The individual can then pursue learning activities and can develop performance skills or competencies in the process (Burke, 1972).

Competency based instruction differs from other modes of instruction, not in its goals, but rather in the assumptions that underlie it and in the approaches that characterize it. The term competency based has become a special designation for an education approach, for a movement (Burke, 1972).

Two characteristics are essential to the concept of competency based instruction. First, precise learning objectives--defined in behavioral and assessable terms--must be known to learner and teacher alike. Competency based instruction begins with identification of the specific competencies that are the objectives of the learner. These objectives are stated in behavioral terms. Means are specified for determining whether the objectives have been met. Both learner and teacher are fully aware of the expectations and of the criteria for completing the learning effort (Burke, 1972).

The second essential characteristic is accountability. The learner knows that he is expected to demonstrate the specified competencies to the required level and in the agreed-upon manner. He accepts responsibility and expects to be held accountable for meeting the established criteria. A third characteristic is personalization. Competency based programs characteristically are individualized; they are self-paced, and thus time is a variable. These programs emphasize objectives and personalization focusing on the needs and accomplishments of the student (Burke, 1972).

### Competencies

Specification of teacher competencies is a most crucial aspect of designing a competency based program (Cooper, 1973). There are

three kinds of teacher competencies specified in a competency based program; (a) knowledge competencies which specify cognitive understandings the student is expected to demonstrate, (b) performance competencies which specify teaching behaviors and attitudes the student is expected to demonstrate, and (c) consequence competencies which specify student behaviors that are taken as evidence of student's teaching effectiveness.

Bowles, (1973) described competency based programs where there are specific competencies to be acquired. These three--knowledge, performance and product--are used respectively to assess the student's cognitive understandings, his teaching behaviors and his teaching effectiveness. The hardware is presently available and all that remains is the educator's synthesis of this equipment into the curriculum so that the newest developments are spaced equally between the hardware and software within carefully designed programs (Bowles, 1973).

Combining the familiar unit lesson plans of the 1950's with the behavioral objectives that were first emphasized in the later 1960's, competency based education is a refinement that will permit individualization and personalization of training programs and still provide structure for these programs. Studies and conventional wisdom suggest that students should be involved in specifying competencies in accord with their needs. If the identification of competencies is in part a search for logical approaches to the acquisition of desired behaviors, that logic must be congruent with the viewpoint of the student. Consequently, student inputs are crucial (Bowles, 1973).

In view of the evidence available, it should be obvious that competency based education is a trend that is definitely being used in the educational circles. Laymen as well as teachers are "tuning in" to this kind of thinking (Klingstedt, 1972).

### Studies in Clothing, Textiles and Merchandising

In the last several years there has been increasing national pressure toward greater innovative thinking in textiles and clothing. Some of those questions were: Should clothing construction be given less emphasis? Is the development of skills important to the understanding of subject matter? Is too much emphasis put on the end result of one or several garments that the student is to construct? Are students being forced into a narrow channel of learning by being required to furnish their own materials and shape them to their own figures? Will this handicap them as they advance in their specialized area? (Wilbur, 1966). These questions and problems do require a solution. For this reason we need to be aware of what is taking place in the classrooms and to be alert to new ways of approaching these questions.

The need for readily available and easily used individualized instructional materials in clothing areas has become increasingly apparent. Various ideas have been expressed about the teacher of the future. Flexibility, resilience, and continued education were most often stressed along with the acceptance of change and willingness to try new procedures. Teacher certification should be considered in terms of competencies rather than credits. Training of

auxiliary personnel and ways teachers can work with them has been pointed out as a need. Teachers will not be expected to have all the answers; they will serve as facilitators and coordinators of learning. Teachers will be held accountable to a greater extent than formerly in providing data for evaluation of programs, and will need help in developing measurable objectives and ways of evaluating them. Need for helping teachers deal with individualized instruction was also frequently mentioned (Mather, 1971).

#### Placement and Evaluation Tests

Wright and Henkel (1951), Collins (1956), Walsh (1959), Witt (1961), Berry (1963) and Gould (1963) developed pre and post tests for placement and evaluation for students in college clothing classes. These studies indicate students come to college with varying degrees of skills and abilities in the clothing construction area.

Wright and Henkel (1951) attempted to find the effect of past clothing experiences which included knowledge, as measured by a paper and pencil test and skills, as measured by a questionnaire. Participants in the study were students enrolled in a beginning clothing course at Purdue University. Most students in the study believed their past clothing experiences were helpful in the clothing construction course. This study concluded that earlier experience in clothing construction did affect achievement in university clothing courses, however, the amount, rather than the type of construction determined the achievement and interest on the student's part.

Collins (1956), at Southern Illinois University, reviewed the use of pretests with 71 colleges and universities that were long established in the field of home economics. On the basis of responses from 60 colleges and universities the following information was obtained: 29 percent of the universities used pretests for placement of students in the beginning clothing courses and 39 percent used a pretest for exemption purposes. Twenty-two institutions used a written objective type test while seven used a practical examination in combination with a written test. Three of the institutions used a check list concerning the student's previous experiences in clothing construction. The results indicate different types of tests are used for the purpose of helping the student enter the class that he can utilize to the maximum.

At Oklahoma State University, Walsh (1959) developed a questionnaire to determine the amount of previous clothing construction of students. Her study presented evidence of the need for an evaluation device to determine students' competence in clothing construction. Walsh revised an existing departmental pretest. Witt (1961) conducted an item analysis on the responses to Walsh's test, in addition she developed seven practical problems to be given as a station-to-station test. Further changes on the pretest were made by Berry (1963) in revising the paper and pencil test and by Gould (1963) in developing the performance test. Walsh (1959), Witt (1961), Berry (1963) and Gould (1963) agreed that pretesting in the area of clothing construction is more effective when a performance test is used in addition to a written test. The results from these studies indicate more evaluation should follow and that it is beneficial to

students to be grouped in classes according to their abilities. These studies in determining clothing construction competence among students gave insight into what should be included in a beginning clothing construction class.

### Individualized Instruction

Research done on programmed instruction during the last five years indicates much learning is taking place through the use of this method (Gaffney, 1971). The use of teaching machines can be traced to the "testing-teaching" machines designed by Sidney L. Pressey of Ohio State University in the 1920's (Pressey, 1960). Despite his reports that the machines helped students to learn and saved many man hours in grading papers, they gained no widespread use. There exists a gap in the review of literature with individualized instruction in home economics from the 1920's until the middle 1950's.

### Clothing Construction Practices

Ettle (1969), Vermilyea (1967) and Davis (1969) studied clothing construction practices and feeling of competence in clothing construction. Ettle (1969) at Texas Technological University investigated clothing construction practices and feeling of competence in clothing construction of clothing and textiles majors and home economics majors. The findings indicated that training and practice in clothing construction were major factors influencing feeling of competence of students in clothing construction skills and in demonstrating and teaching these skills to others.

At Iowa State University, Vermilyea (1967) studied the merit of two college courses in clothing construction. It was found that student performance in an advanced course reflected previous student preparation. The purpose of the investigation was to determine if an elementary course in clothing construction and another one in pattern making prepare students equally well for a subsequent course. Findings were that students from either an elementary course in clothing construction or pattern making were equally prepared for the advanced course.

Davis (1969) at Ohio State University compared two programs of self-instruction for clothing techniques. The study was to determine how a self-instructional program for a specified clothing construction technique could be structured to provide maximum efficient learning experiences for students. Two programs were used, one was structured to give students detailed procedural directions and one was nonstructured giving students only an introduction to the technique and learning situation. The students preferred some guidance and direction when learning in a self-instructional setting and expressed preference for the medium in which the process most resembled a live demonstration. The studies cited helped to identify needed competencies in the beginning college clothing construction course.

### Performance Appraisal and Evaluations

Preparing students for performance appraisal requires a great deal of time and demands the cooperation and coordination of all teachers who work with students in developing these skills

and characteristics. Objectives of evaluating students varied from one organization to another but could generally be classified according to one or more of the following:

1. To assist in improving their performance.
2. To create an awareness in each instructor that he has responsibilities for the development of his subordinates and for his own personal development.
3. To provide information that will assist in effectively planning and organizing, recruiting and training and selection (Cornwell and Fraser, 1969).

In addition to mere satisfaction of operative skill, requirements need to be considered in the classroom. Quality of work, quantity of work, written and oral communications, knowledge of work and work habits are factors which receive the majority of attention in the classroom.

There is a shying away from the other more esoteric factors because of the felt need to be objective in the evaluation of student progress and it is not possible to measure such things as attitude, morale, interpersonal relationships, dependability, adaptability and originality of thinking (Cornwell and Fraser, 1969). The important point in question is not how to measure these items which are important characteristics, but rather that they should be important considerations of a teacher in identifying desirable outcomes in a particular course or sequence of courses. The teacher should realize that the proper development of these skills will not occur in any one, two or even three courses. Development of these skills and characteristics requires a great deal of time.

Campbell, Dunnette, Lawler and Weick (1970) distinguished among the concepts of behavior, performance, and effectiveness as three outcomes of organizational roles. The first concept, behavior, is simply the activity people perform. Performance is behavior that has been evaluated in terms of its contribution to the goals of the organization. Finally, effectiveness refers to some summary index of organizational outcomes for which an individual is at least partially responsible (Campbell, 1973). The crucial distinction between performance and effectiveness is that the latter does not refer to behavior directly but rather is a function of additional factors not under the control of the individual.

### Testing Competency

In testing the occupational competency of Industrial and Technical teacher educators Corman (1973) reported that the most extensive written verification of employment records has never proved to be an adequate substitute for a demonstration of competence. A few states have done extensive work in preparing and administering occupational competency tests. Two considerations have governed activity in the area of competency testing: (1) there has been no unanimity of opinion of the need for such testing; and (2) there has been only a fraction of the necessary funding available for the development, printing, dissemination and security of the tests (Corman, 1973).

A test is a procedure for evaluating the response of an individual to a standard set of conditions. The term performance test is reserved for tests that evaluate under realistic conditions the performance of tasks that have value in some life situation. These are

performances that are not just incidental to the test, but are worthy in themselves of some learning effort. There are few opportunities in everyday life to mark a machine-scorable answer sheet in response to a multiple choice question (Morrison, 1973).

Smith and Tyler (1942) in their study of evaluation on page 30 stated:

Studying the results of evaluation often leads to a reformulation and improvement in the conception of the objectives to be attained. The results of evaluation and any reformulation of objectives will suggest desirable modification in teaching and in the education program itself. Modifications in the objectives and in the education program will result in corresponding modifications in the program of evaluation. So, the cycle goes on.

Limiting measurement to testing after instruction accounts for much ineffectiveness of classroom teaching in home economics as well as in other fields, and neither chronological age nor the amount of previous experience indicate with any degree of accuracy, the level of the students knowledge and skill (Arny, 1953).

Research continues in seeking ways to accurately evaluate competencies in the clothing construction area. As stated in the questionnaire (see Appendix A) the student should achieve that particular competency at an acceptable level determined by the instructor. After performing what is considered desirable in the class the student has satisfactorily achieved and mastered that competency.

### Conclusions

A brief review of curriculum development concepts indicates that the process in curriculum building is never ending. The various definitions point to the similarities in the curriculums that can be

viewed as a process to help the learner achieve greater realms. The basic underlying principles may be closely related, but the outcomes can be achieved in various ways.

Research on competency based education in the field of clothing and textiles is absent from the review of the literature because this is a new approach in the education field. Two characteristics are essential to the concept of competency based education. The first characteristic is precise learning objectives--defined in behavioral and assessable terms--which are known to learner and teacher alike. Competency based education begins with identification of the specific competencies that are the objectives of the learners. The second essential characteristic is accountability. The learner knows that he is expected to demonstrate the specified competencies to the required level and in the agreed-upon manner. He accepts responsibility and expects to be held accountable for meeting the established criteria (Competency Based Teacher Education, 1972). Another important characteristic is personalization which is associated almost universally with competency based education. Competency based programs characteristically are individualized; they are self-paced, and thus time is a variable (Competency Based Teacher Education, 1972). Competency based programs, emphasizing objectives and personalization, focuses on the needs and accomplishments of the students.

After reviewing the literature there appears to be a need for clothing educators to identify competencies for the area of clothing and to study and evaluate competency based education.

## CHAPTER III

### PROCEDURE AND METHOD

The purpose of this study was to identify the competencies which should be included in a college level beginning clothing construction course. A questionnaire was used to obtain the opinions of a panel of judges to ascertain the most important competencies to be included. The findings of this study can be used in making recommendations for implementing competency based education in the beginning clothing construction courses.

#### Development of Instrument

In developing an instrument for use in identifying competencies considered essential a list of suggested clothing construction competencies was compiled (see Appendix A). The competencies were selected from textbooks, journals, professional publications, personal suggestions from educators, business personnel and home economists (see Appendix B). The competencies were grouped in eight separate categories to make reading easier for the participants. They were: (1) Selection, Cutting, Marking; (2) Alterations; (3) Operation of the Sewing Machine; (4) Seams and Seam Finishes; (5) Construction Processes; (6) Preparation and Hand Stitches; (7) Fasteners and (8) Miscellaneous.

The questionnaire was devised to identify the competencies which the groups of educators thought to be important enough to be included in a beginning clothing construction class. Sixty-nine competencies were chosen to be included in the questionnaire. Three alternative choices were given for each competency: (1) Competency should be taught in beginning college clothing construction course; (2) Competency should be taught in other courses; (3) This competency is considered not important to learn.

For purposes of validation, the questionnaire was evaluated by a seminar class in Home Economics Education, Spring, 1973 and the summer 1973 class in Evaluation in Home Economics. The suggestions made by members of these classes were incorporated into the instrument. The questionnaire was pretested August 16, 1973, at the Vocational Home Economics Teachers West Sub District II planning meeting held in Clinton, Oklahoma. Approximately 25 secondary homemaking teachers were in attendance. Time was allotted by the district supervisor for distribution and explanation of the questionnaire. Completed questionnaires were collected and again reviewed and revised by the writer. In August, 1973, four Southwestern State College professors, all experienced in teaching clothing construction, evaluated the questionnaire and made further recommendations.

After careful examination by the writer's adviser and committee the questionnaire was printed in its final form, (Appendix A). Enclosed with the questionnaire was a cover letter (Appendix C) and a self-addressed, stamped envelop for the respondents use in returning the questionnaire.

## Selection of Sample

Educators were selected from the following groups to participate in this study.

### Educators from the Southwest region of the United States

(Oklahoma, Texas, Arkansas, Louisiana, New Mexico)

Group 1 - Clothing specialists in extension

Group 2 - State and district supervisors in home economics education

Group 3 - Secondary homemaking teachers

Group 4 - State college faculty in clothing and textiles departments

### Educators from the ten universities with the highest enrollments in Colleges of Home Economics (McGrath, 1964)

Group 5 - College professors from Iowa State University, Kansas State University, Texas Technological University, University of Tennessee, Michigan State University, Oklahoma State University, Pennsylvania State University, Ohio State University, Purdue University, Colorado State University

### Companies which hire educational representatives to demonstrate and/or promote products used in clothing construction

Group 6 - Home economists in the following businesses:  
American Thread, Armo Company, Belding Corticelli, Burlington/Klopman Retail Fabrics, Butterick Fashion Marketing Company, Coats &

Clark, Inc., Cotton Incorporated, E. I. DuPont de Nemours & Co., Inc., Lily Mills Company, Man-Made Fiber Producers Association, Inc., Maxant Button & Supply Company, Pellon Corporation, Pendleton Woolen Mills, J. C. Penney Company, Inc., Risdon Manufacturing Company, Scoville Manufacturing Company, Simplicity Pattern Company, Inc., Singer Company, Springs Mills, Inc., Stacy Fabrics Corporation, Talon Educational Service, Vogue Pattern Service, J. Wiss & Sons Company

The first group in this region was composed of the clothing specialists in extension. A letter was sent to the extension directors in Arkansas, Louisiana, Texas and New Mexico requesting the names of the clothing specialists.

The second group was composed of the state and district supervisors of secondary vocational home economics education in the Southwest region. The third group was composed of secondary homemaking teachers in the same region. The fourth group included state college faculty in clothing and textiles departments. Names of persons in Groups Two, Three and Four were all obtained by writing letters to each State Department of Education requesting this information. A directory or list was returned. All 39 names included in the directory were used in Group Two, State and District Supervisors in Home Economics Education. The total number (41) listed for Group Four, Clothing Professors in State Colleges, were also included. Because of the large number of secondary homemaking teachers in each state only 97 names or ten percent in Group Three of Secondary

Homemaking Teachers were randomly selected. In this group two questionnaires from Texas and three from Louisiana were returned unclaimed.

Eleven educators from ten universities with the highest enrollments in the Colleges of Home Economics in 1964 in the United States were used in Group Five. One of the ten universities sent two different replies to the questionnaire. Since both questionnaires were opinions of different professors, each was used.

The sixth and final group was composed of companies which hire home economists to demonstrate and/or promote products used in clothing construction. Twenty-four companies listed in the May, 1973, Journal of Home Economics which exhibited their wares at the annual National Convention of the American Home Economics Association in Atlantic City, New Jersey, June, 1973, were selected as participants.

Only two responses were received from the first mailed questionnaires to the group of companies which hire home economists to demonstrate and promote their products. One respondent completed the questionnaire and the other left it blank. The latter company felt they had no one currently employed to answer and rather than invalidate the study, they returned it. A second request to the remaining 22 companies was mailed along with another questionnaire and self-addressed stamped envelope (See Appendix D). From the 20 returns received 14 were usable. Six companies responded stating they did not have personnel qualified to complete the questionnaire. The number of questionnaires mailed to each of the six groups is listed in Appendix E.

Table I indicates the number and percentage of participants who completed and returned questionnaires. The unclaimed mail and blank questionnaires were not included. Fifty-six percent (124) of the total number of questionnaires (223) were returned.

TABLE I  
NUMBER AND PERCENT IN EACH GROUP  
RETURNING QUESTIONNAIRES

Groups	Returns		
	Total Sample	Number Responding	Percent
1 - Clothing Specialists in Extension	12	12	100
2 - Supervisors in Home Economics Education	39	19	49
3 - Secondary Homemaking Teachers	97	44	45
4 - Professors in State Colleges	41	24	59
5 - Professors in Universities	11	11	100
6 - Home Economists in Business	24	14	58
Total	224	124	56%

After the questionnaires were received they were divided into groups and the information was then key punched onto cards. A computer was used to tabulate the findings. The data were analyzed by figuring percentages of responses by each group for each competency in each of the three columns, 1 - Beginning Course; 2 - Other Course and 3 - Not Important to Learn.

A comparison was made for each of the 69 competencies to identify the importance of each competency among the six different groups (Specialists in Extension, Supervisors in Home Economics Education, Secondary Homemaking Teachers, Professors in State Colleges, Professors in Universities and Home Economists in Business. To find the average of the responses for the six groups the total responses of each category for each competency were added together and divided by six. The 69 competencies were ranked by average percent of groups who indicated whether the competency should be in the beginning clothing construction course. The researcher arbitrarily set the cut off at 50 percent and higher for including the competency in beginning clothing construction. In Chapter IV the analysis of the data is presented.

## CHAPTER IV

### DATA ANALYSIS AND RESULTS

The purpose of this chapter is to identify those competencies in beginning clothing construction considered important by six groups of educators in order to begin implementation of competency based education. The participants were asked to place each competency in one of three categories, 1 - beginning clothing construction, 2 - some other course, or 3 - not important to learn. Eight categories were presented in which the respondents were asked to check those competencies that they believed essential in beginning clothing at the college level.

Responses were received from 123 of the six groups (State and District Supervisors, Extension, Secondary Homemaking Teachers, State College Professors, University Professors and Business). Percentages were calculated by computer and used to analyze in which category the majority of the participants ranked the competency. The analysis of the choices of the six different groups of educators on the questionnaire is shown in the tables which follow.

A complete rank ordering by percentages of responses of all the competencies is presented in the appendix (see Appendix F). Tables showing the analysis of the percentage of responses of the six different groups of educators and ranking and percent of agreement on competencies within the various categories have been developed.

The analysis of the percentage of choices of the six different groups of educators of the first section on the questionnaire is shown in Table II, page 37. The first five competencies show a high degree of agreement, with at least four groups in 100 percent agreement. Based upon percentages all groups except Group 3 agreed 100 percent that Competency 1 - "Selecting appropriate and compatible pattern and fabric" and Competency 5 - "Properly cutting and matching where necessary" should be taught in beginning college clothing construction. Ninety-five percent of the secondary homemaking teachers thought Competency 1 and 93 percent thought Competency 5 should be in the beginning clothing construction.

Competency 2 - "Selecting matching thread and other findings" also had 100 percent agreement among four groups that the competency should be taught in beginning college clothing construction course. Group 3, Secondary Homemaking Teachers and Group 6, Home Economists in Business were the only groups who had responses in the other categories.

On Competency 3 - "Following the pattern directions sheet" two groups, Extension and State and District Supervisors had 100 percent agreement and more than 85 percent of the other groups thought it should be taught in beginning clothing construction. Three groups were in 100 percent agreement on "Preparing fabric, correctly place and fasten pattern on fabric" - Competency 4. Of the other three groups at least 91 percent felt it should be placed in beginning clothing.

Even though over 54 percent of each group thought Competency 6 - "Making tailor tacks using double thread through the pattern and two

TABLE II  
RESPONSES OF THE SIX GROUPS ON COMPETENCIES CONCERNING  
SELECTION, CUTTING AND MARKING OF FABRIC

Competency	Percent Responding																	
	Extension N = 12			State & Dist. Supervisors N = 19			Secondary Teachers N = 44			State Coll. Professors N = 24			University Professors N = 11			Business N = 14		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
*1 - Selecting appropriate & compatible pattern & fabric	100	0	0	100	0	0	95	5	0	100	0	0	100	0	0	100	0	0
*2 - Selecting matching thread & other findings	100	0	0	100	0	0	89	4	7	100	0	0	100	0	0	92	8	0
3 - Following the pattern directions sheet	100	0	0	100	0	0	91	7	2	96	0	4	91	9	0	85	15	0
**4 - Preparing fabric, correctly place & fasten pattern on fabric	100	0	0	100	0	0	93	7	0	100	0	0	91	9	0	92	8	0
*5 - Properly cutting & matching where necessary	100	0	0	100	0	0	93	7	0	100	0	0	100	0	0	100	0	0
6 - Making tailor tacks using double thread through the pattern & two layers of fabric	73	27	0	79	21	0	57	34	0	54	33	13	60	30	10	62	23	15
7 - Marking with tracing wheel & paper with straight single line invisible on right side of fabric	91	0	9	100	0	0	79	14	7	92	0	8	90	10	0	69	15	16
8 - Marking with pins or soap pushing pins through two layers of fabric & patterns	55	18	27	79	11	10	42	40	18	57	26	17	36	18	46	62	15	23

1 - Taught in beginning college clothing construction course; 2 - Taught in other course; 3 - Considered not important to learn

\*100% agreement for inclusion in beginning clothing construction by 4 or more groups

\*\*100% agreement for inclusion in beginning clothing construction by 3 groups

layers of fabric" should be included in beginning clothing construction, 34 percent felt it should be taught in some other course.

Only one group, State and District Supervisors were in 100 percent agreement on Competency 7 - "Marking with tracing wheel and paper with straight single line invisible on right side of fabric". Over 69 percent of each of the other groups placed this competency in beginning clothing construction.

On Competency 8 - "Marking with pins or soap pushing pins through two layers of fabric and pattern" more than 36 percent of each group thought it should be in beginning clothing construction, 11 percent thought it should be taught in some other course and 10 percent thought it was not important to learn. Four groups, Extension (55 percent), Supervisors (79 percent), State College Professors (57 percent) and Business (62 percent), thought it should be included in beginning clothing construction. In Group 3 and 5, Secondary Homemaking Teachers and the University Professors, 46 percent thought it not important to learn. This competency might be one that could be studied by the faculty teaching beginning clothing construction to evaluate its merit.

All of the competencies listed in Table II except the two concerned with marking with tailor tacks and pins or soap had more than 69 percent agreement by the groups for inclusion in beginning clothing construction. These competencies were all concerned with selection, cutting, and marking of fabric.

On the following page Table III presents the percent of agreement for responses on competencies concerning fabric selection, cutting and marking among the six groups. The first five competencies

TABLE III  
PERCENT OF AGREEMENT ON COMPETENCIES CONCERNING SELECTION,  
CUTTING AND MARKING OF FABRIC BY SIX GROUPS

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
100%	1* 2 3 4 5	1 2 3 4 5 7		1 2 4 5	1 2 5	1 5
90%	7		1 4 5 3	3 7	3 4 7	2 4
80%			2			3
70%	6	6 8	7			
60%					6	7 6
50%	8		6	8 6		
Below 50%			8		8	8

\*Refers to number of competency identified on questionnaire

show much agreement, with at least four groups in 100 percent agreement on the competencies which should be taught in beginning clothing construction. Competency 1 - "Selecting appropriate and compatible pattern and fabric" and Competency 5 - "Properly cutting and matching where necessary" had agreement by all the respondents except the secondary teachers.

#### Competencies Concerning Alterations

Table IV, page 41, gives the responses among the six groups concerning alterations.

Regarding Competency 9 - "Making appropriate alterations in the neckline" 58 percent or more of each group were of the opinion this competency should be placed in the beginning clothing construction course. More than 21 percent of each group placed it in the second column, other course. This competency of altering in the neckline area is a more advanced technique than some of the other alterations and deserves closer study by the faculty teaching it as to where it should be taught. No group thought the competency not important to learn. The alterations in the neckline and sleeve girth had lower percentages placing them in beginning clothing than did the other alterations.

More than 72 percent of each of the groups included Competency 10 - "Altering in the shoulder area" and Competency 11 - "Altering in the bust line area" in beginning clothing construction. Three groups, State College and University Professors and Business, were in 100 percent agreement in placing Competency 12 - "Waist line", Competency 14 - "Length", and Competency 15 - "Sleeve length" in

TABLE IV  
RESPONSES OF THE SIX GROUPS ON COMPETENCIES  
CONCERNING ALTERATIONS

Competency		Percent Responding																	
		Extension N = 12			State & Dist. Supervisors N = 19			Secondary Teachers N = 44			State Coll. Professors N = 24			University Professors N = 11			Business N = 14		
Make appropriate alterations in the following locations when necessary:		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
9 - Neckline		58	42	0	67	33	0	66	34	0	75	25	0	64	34	0	79	21	0
10 - Shoulder		83	17	0	72	28	0	75	25	0	96	4	0	82	18	0	79	21	0
11 - Bust line		92	8	0	83	17	0	79	21	0	92	8	0	73	27	0	93	7	0
*12 - Waist line		92	8	0	94	6	0	89	11	0	100	0	0	100	0	0	100	0	0
13 - Hip line		92	8	0	83	17	0	80	20	0	96	4	0	91	9	0	100	0	0
*14 - Length		92	8	0	94	6	0	93	7	0	100	0	0	100	0	0	100	0	0
*15 - Sleeve length		92	8	0	89	11	0	89	11	0	100	0	0	100	0	0	100	0	0
16 - Sleeve girth		75	25	0	72	28	0	57	43	0	75	25	0	64	36	0	64	36	0
Relocate darts by the following methods:																			
17 - Pivot method		27	73	0	42	58	0	50	48	2	33	67	0	36	46	18	50	50	0
18 - Slash & spread method		64	36	0	53	47	0	35	65	0	29	71	0	55	45	0	36	64	0

1 - Taught in beginning college clothing construction course; 2 - Taught in other course; 3 - Considered not important to learn

\*100% agreement for inclusion in beginning clothing construction by 3 groups

beginning clothing construction. More than 89 percent of the other three groups included it in the beginning clothing construction.

The Business group was in 100 percent agreement on Competency 13 - "Alteration in the hip line area". Over 80 percent of the other groups also included this competency in the beginning clothing construction.

More than 57 percent of each of the groups placed Competency 16 - "Altering the sleeve girth" in the beginning course. On Competency 17 - "Relocating darts by the pivot method" 27 percent of the respondents placed this competency in the beginning clothing construction. Fifty-five percent thought it should be included in some other course.

Thirty-six percent or more of each of the six groups thought Competency 18 - "Relocating darts by the slash and spread method" should be taught in some other course. Twenty-nine percent of each groups thought it should be included in beginning clothing construction. Three groups leaned more heavily in placing it in beginning clothing construction than the others who favored it in some other course by about the same margin of percentage. Both of these Competencies--17 and 18 perhaps should be studied by the faculties in light of the direction each group is using the competency.

The first eight competencies relating to appropriate alterations were checked with consistently high percentages (more than 64 percent) by the groups for inclusion in beginning clothing construction. On the two competencies dealing with dart relocation the majority of the groups indicated they should be placed in some other course.

In examining Table V, page 44, all the groups except Home Economists in Extension ranked Competency 17 "Relocating darts by the pivot method" 50 percent and lower for inclusion in beginning clothing construction. All of the groups agreed that Competency 18 - "Relocating darts by the slash and spread method" should not be included in beginning clothing construction. The range in percentage indicates these two competencies should not be taught in beginning clothing construction. All of the other competencies concerning alterations had the majority of responses favoring their inclusion in beginning clothing construction.

Competencies Concerning Operating the  
Sewing Machine

Table VI, page 45, gives the comparisons concerning the sewing machine.

Competency 19 - "Operating the sewing machine" shows three groups, Extension, State and District Supervisors, and State College Professors, in 100 percent agreement that it should be included in beginning clothing construction. More than 91 percent of the remaining three groups had similar reactions.

The majority of each group checked Competency 20 - "Using at least two attachments" for inclusion in beginning clothing construction. Competency 21 - "Using correct tension and stitch size on machine" five groups were in 100 percent agreement. Ninety-eight percent of the Secondary Homemaking Teachers also placed this competency in beginning clothing construction.

TABLE V

PERCENT OF AGREEMENT ON COMPETENCIES CONCERNING  
ALTERATIONS BY SIX GROUPS

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
100%	11* 12			12 14 15	12 14 15	12 13 14 15
90%	13 14 15	12 14	14	10 13 11	13	11
80%	10	15 13 11	12 15 13		10	
70%	16	16 10	11 10	9 16	11	9 10
60%	18	9	9		9 16	16
50%	9	18	16 17		18	17
Below 50%	17	17	18	17 18	17	18

\*Refers to number of competency identified on questionnaire

TABLE VI  
RESPONSES OF THE SIX GROUPS ON COMPETENCIES CONCERNING  
OPERATION OF THE SEWING MACHINE

Competency	Percent Responding														
	Extension N = 12			State & Dist. Supervisors N = 19			Secondary Teachers N = 44			State Coll. Professors N = 24			University Professors N = 11		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
**19 - Operating the sewing machine	100	0	0	100	0	0	93	5	2	100	0	0	91	9	0
20 - Using at least two attachments	82	9	9	90	10	0	76	17	7	67	25	8	55	27	18
*21 - Using correct tension & stitch size on machine	100	0	0	100	0	0	98	2	0	100	0	0	100	0	0
22 - Properly cleaning and oiling the machine	91	9	0	95	5	0	91	9	0	79	21	0	78	22	0

1 - Taught in beginning college clothing construction course; 2 - Taught in other course; 3 - Considered not important to learn

\*100% agreement for inclusion in beginning clothing construction by 4 or more groups

\*\*100% agreement for inclusion in beginning clothing construction by 3 groups

Over 78 percent of the six groups placed Competency 22 - "Properly cleaning and oiling the machine" in beginning clothing construction. The Business group was the only one in 100 percent agreement on this competency to include it in beginning clothing construction. This group possibly realizes the ultimate value of this competency through their sales and services.

Competency 20 - "Using at least two attachments" is the first competency to appear in the tables with a small percent (7-18 percent) from four groups indicating it was not considered important to learn.

Table VII shows the Home Economists in Extension and State and District Supervisors with identical percentages. All the groups show very similar rating of each competency with the Competency 20 - "Using at least two attachments on the sewing machine" at the lowest position.

#### Competencies Concerning Seams and Seam Finishes

Responses of the six groups concerning seams and seam finishes follows in Table VIII, page 48.

Secondary Homemaking Teachers, University Professors and Home Economists in Business marked percentages in the 70's to include Competency 23 - "Making a clean finished edge which is turned under 1/4 inch and stitched 1/16 inch from folded edge" in beginning clothing construction. More than 71 percent included Competency 24 - "Using machine zig zagging which is flat, smooth and even in width"

TABLE VII  
PERCENT OF AGREEMENT ON COMPETENCIES CONCERNING OPERATION  
OF THE SEWING MACHINE BY SIX GROUPS

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
100%	19* 21	19 21		19 21	21	21 22
90%	22	22	21 19 22		19	19 20
80%	20	20				
70%			20	22	22	
60%				20		
50%					20	

\*Refers to number of competency identified on questionnaire

TABLE VIII  
RESPONSES OF THE SIX GROUPS ON COMPETENCIES CONCERNING  
SEAMS AND SEAM FINISHES

Competency	Percent Responding														
	Extension N = 12			State & Dist. Supervisors N = 19			Secondary Teachers N = 44			State Coll. Professors N = 24			University Professors N = 11		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
23 - Making a clean finished edge which is turned under 1/4 inch and stitched 1/16 inch from folded edge	82	9	9	95	5	0	75	23	2	96	0	4	73	27	0
24 - Using machine zig zagging which is flat, smooth and even in width	100	0	0	95	5	0	82	16	2	92	4	4	82	18	0
*25 - Making a plain seam which is flat, uniform in width & true in line	100	0	0	100	0	0	89	11	0	100	0	0	100	0	0
26 - Making a flat fell seam with two lines of stitching right side, spaced about 3/8 inch wide	55	36	9	53	42	5	46	52	2	67	33	0	55	45	0
27 - Making a French seam which is completely enclosed, 3/8 inch wide	55	36	9	53	42	5	46	54	0	63	37	0	36	46	18

1 - Taught in beginning college clothing construction course; 2 - Taught in other course; 3 - Considered not important to learn  
\*100% agreement for inclusion in beginning clothing construction by 4 or more groups

in beginning clothing construction. The Extension Group was 100 percent in their agreement to include this competency.

Four groups were in 100 percent agreement on including Competency 25 - "Making a plain seam which is flat, uniform in width and true in line" in beginning clothing construction. More than eighty-six percent of the Secondary Teachers and Business Groups included it in beginning clothing construction.

More than 53 percent favored inclusion of Competency 26 - "Making a flat fell seam with two lines of stitching right side, spaced about  $\frac{3}{8}$  inch wide" in beginning clothing construction. Thirty-three percent placed it in some other course. The Secondary Homemaking Teachers were the only group who had over half (52 percent) placing it in some other course. Competency 27 - "Making a French seam which is completely enclosed,  $\frac{3}{8}$  inch wide" had almost identical responses with the exception of the University Professors Group. They showed a majority favoring the inclusion of this competency in some other course rather than the beginning clothing construction. Three of the groups thought it not important to learn by a small percent (5-18 percent). Since the last two competencies did not have a wide margin of agreement that they be included in beginning clothing construction they deserve closer consideration by the teaching personnel.

Responses of the six groups on Table IX, page 50, indicates all the groups chose Competency 25 - "Making a plain seam which is flat, uniform in width and true in line" by the largest percentage to be included in beginning clothing. All of the competencies in this

TABLE IX  
PERCENT OF AGREEMENT ON COMPETENCIES CONCERNING  
SEAMS AND SEAM FINISHES BY SIX GROUPS

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
100%	24* 25	25		25	25	
90%		23 24		23 24		
80%	23		25 24		24	25
70%			23		23	23 24
60%				26 27		26
50%	26 27	26 27	26 27		26	27
Below 50%					27	

\*Refers to number of competency identified on questionnaire

category had a percentage of over 50 percent indicating they should be included in beginning clothing.

### Competencies Concerning Construction Processes

Table X, page 52, gives the comparisons among the six groups concerning construction process.

The following five competencies were agreed upon by 100 percent for inclusion in beginning clothing construction by at least three groups and 79 percent or higher by the remaining groups. They were:

- 28 - Stay stitching using directional stitching on all off grain seams
- 29 - Stitching darts using directional stitching with last few stitches on the folded edge
- 34 - Applying facing with outer edge treated properly, seams trimmed, understitched tacked or stitched in well of seam
- 36 - Understitching with stitching close to well of seam through facing and two thicknesses of seams
- 44 - Using proper pressing techniques

Fifteen percent of the business group marked Competency 28 unimportant to learn. This might be due to their speed methods and newer innovations in fabric that no longer require stay stitching because of their stationery properties.

Competency 32 - "Applying a fusible interfacing" was placed by three groups, Extension, Secondary Teachers and Business, in beginning clothing construction. College and University Professors, State and District Supervisors placed it in other courses. Thirty-six percent of the University Professors and approximately one-third of the college Professors had an equal percentage of their choices placing it in the not important to learn column.

TABLE X  
RESPONSES OF THE SIX GROUPS ON COMPETENCIES CONCERNING  
CONSTRUCTION PROCESSES

Competency	Percent Responding																	
	Extension N = 12			State & Dist. Supervisors N = 19			Secondary Teachers N = 44			State Coll. Professors N = 24			University Professors N = 11			Business N = 14		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
**28 - Stay stitching using directional stitching on all off grain seams	100	0	0	100	0	0	91	4	0	92	4	4	100	0	0	85	0	15
*29 - Stitching darts using directional stitching with last few stitches on the folded edge	100	0	0	100	0	0	93	5	2	100	0	0	100	0	0	92	9	0
30 - Attaching bodice to skirt evenly matching sides, CB, CF, & using uniform seams	91	9	0	100	0	0	86	14	0	96	4	0	91	9	0	92	8	0
31 - Applying medium weight interfacing properly to reinforce	100	0	0	79	21	0	89	11	0	96	4	0	100	0	0	93	7	0
32 - Applying a fusible interfacing	64	36	0	37	63	0	49	40	11	26	57	17	27	37	36	71	29	0
33 - Applying hair canvas interfacing in proper locations	18	82	0	6	89	5	21	79	0	4	96	0	9	91	0	36	64	0
**34 - Applying facing with outer edge treated properly, seams trimmed, understitched tacked or stitched in well of seam	100	0	0	79	21	0	84	16	0	96	4	0	100	0	0	100	0	0
35 - Grading and layering enclosed seams	100	0	0	95	5	0	86	11	0	92	8	0	91	9	0	92	8	0

TABLE X (Continued)

Competency	Percent Responding														
	Extension N = 12			State & Dist. Supervisors N = 19			Secondary Teachers N = 44			State Coll. Professors N = 24			University Professors N = 11		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
36 - Understitching with stitching close to well of seam through facing & two thicknesses of seams	100	0	0	100	0	0	93	7	0	100	0	0	100	0	0
37 - Facing a collar & attaching it even-balanced, smooth, free from wrinkles fullness eased to roll	83	17	0	84	16	0	73	27	0	96	4	0	100	0	0
38 - Setting in a sleeve which is inconspicuous, smooth, fullness evenly distributed, hangs straight, free from gathers	100	0	0	90	10	0	91	9	0	92	8	0	100	0	0
39 - Applying a patch pocket which is uniform in size, shape, top stitched & reinforced at the top	55	27	18	77	23	0	67	26	7	53	33	4	36	55	9
40 - Applying a pocket in a seam which is inconspicuous, flat, smooth	36	55	9	53	47	0	46	50	4	50	46	4	27	64	9
41 - Applying a welt pocket which is smooth, flat, straight, uniform size, square corners	18	82	0	6	94	0	18	80	2	8	88	4	0	100	0
42 - Constructing traditional cuffs, interfaced, uniform size, turned back & stitched in seams	36	46	18	48	47	5	48	50	2	75	25	0	55	45	0

TABLE X (Continued)

Competency	Percent Responding														
	Extension			State & Dist.			Secondary			State Coll.			University		
	N = 12			N = 19			N = 44			N = 24			N = 11		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
43 - Using fake cuffs which are topstitched 1/4 inch from edge, raw edge caught inside	46	27	27	53	37	11	37	54	9	33	46	21	0	46	54
*44 - Using proper pressing techniques	100	0	0	100	0	0	98	2	0	96	4	0	100	0	0
45 - Lining a garment using appropriate application	18	82	0	26	69	5	23	77	0	17	83	0	27	73	0

1 - Taught in beginning college clothing construction course; 2 - Taught in other course; 3 - Considered not important to learn

\*100% agreement for inclusion in beginning clothing construction by 4 or more groups

\*\*100% agreement for inclusion in beginning clothing construction by 3 groups

definite higher percentage (71 percent) placing it in beginning clothing construction. This could be due to the new fusible products which are now on the market and available for consumer use.

More than 64 percent of each group placed Competency 33 - "Applying hair canvas interfacing in proper locations" in some other course. "Applying a patch pocket which is uniform in size, shape, top stitched and reinforced at the top", Competency 39 was placed by all the groups with the exception of the University Professors in beginning clothing construction. Fifty-five of the University Professors feel it should be placed in some other course.

Fifty percent of two groups, Supervisors and State College Professors, indicated Competency 40 - "Applying a pocket in a seam which is inconspicuous, flat and smooth" should be taught in beginning clothing construction. Three groups, Extension, Secondary Teachers and University Professors, indicated by 50 percent to include it in some other course. The business group divided their choices 50/50 in favor of the beginning clothing course and some other course.

"Applying a welt pocket which is smooth, flat, straight, uniform size and square corners" - Competency 41 should not be included in beginning clothing construction according to all groups. All the groups with the exception of the business group indicated by more than 80 percent to include the competency in some other course while 57 percent of the business group favored including it in some other course.

More than 55 percent of three groups, State College and University Professors and Business, included Competency 42 - "Constructing traditional cuffs, interfaced, uniform size, turned back and stitched

in seams" in beginning clothing construction. The other three groups favored its inclusion in some other course by more than 46 percent.

The majority of the groups thought Competency 43 - "Using fake cuffs which are topstitched 1/4 inch from edge, raw edge caught inside" should be excluded from beginning clothing construction. Three groups, Extension, Supervisors and Business indicated it should be included in beginning clothing construction by more than 39 percent. The Secondary Teachers and State College Professors indicated by 46 percent to include it in some other course.

Competency 45 - "Lining a garment using appropriate application", more than 69 percent of all the groups except business indicated it should be placed in some other course.

A wider range of choices was presented on the competencies in Table X than the previous tables. More of these competencies had a larger percentage placing them in some course other than beginning clothing construction.

Table XI presents the data relating to construction processes. The following competencies received a majority of percentage (over 50 percent) of responses for exclusion from beginning clothing construction. They were:

Competency 32 - Applying fusible interfacing

Competency 33 - Applying hair canvas interfacing in proper locations

Competency 41 - Applying welt pocket which is smooth, flat, straight, uniform size, square corners

Competency 43 - Using fake cuffs which are topstitched 1/4 inch from edge, raw edge caught inside

Competency 45 - Lining a garment using appropriate application

TABLE XI

PERCENT OF AGREEMENT ON COMPETENCIES CONCERNING  
CONSTRUCTION PROCESSES BY SIX GROUPS

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
100%	28* 29 31 34 35 36 38 44	28 29 30 36 44		29 36	28 29 31 34 36 37 38 44	34 44
90%	30	35 38	44 38 39 36 38	30 31 34 37 44 28 35 38	30 35	31 29 30 35 38
80%	37	37	31 30 35 34			28 36
70%		31 34 39	37	42		42 32 45
60%	32		39	39		37 39
50%	39	40 43		40	42	40

TABLE XI (Continued)

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
Below 50%	43	42	32	43	39	4;
	40	32	42	32	32	43
	42	45	40	45	40	33
	33	33	43	41	45	
	41	41	45	33	33	
	45		33		41	
			41		43	

\*Refers to number of competency identified on questionnaire

Competencies Concerning Preparation and Hand  
Stitches in Clothing Construction

Table XII, page 60, gives the comparisons concerning preparation and hand stitches in clothing construction.

All the groups with the exception of Secondary Teachers and Business Groups were in 100 percent agreement in including Competency 51 - "Correctly determining length for a garment" and Competency 52 - "Trimming hem allowance so that it is uniform in width" in beginning clothing construction. More than 85 percent of each of the two groups also agreed it should be included in the beginning clothing construction.

Less than 50 percent of each of the groups placed Competency 56 - "Catch stitching working left to right small X's about  $\frac{3}{8}$  to  $\frac{1}{2}$  inch, uniform size" in beginning clothing construction and more than 42 percent of the groups placed it in some other course. The percentages only varied up to eight percent difference in the opinions of these six groups. This competency should be studied closely by the teaching faculty for its inclusion in different courses.

Sixty-eight percent of five groups agreed that Competency 57 - "Using invisible or running hemming stitch with stitches take between two fabrics on underneath side", should be included in beginning clothing construction. Forty-six percent of the business group thought it should be placed in beginning clothing construction and 46 percent thought it should be in some other course.

Over one-half of the State College Professors and University Professors marked Competency 54 - "Hemming using a fusible product

TABLE XII  
RESPONSES OF THE SIX GROUPS ON COMPETENCIES CONCERNING PREPARATION  
AND HAND STITCHES IN CLOTHING CONSTRUCTION

Competency	Percent Responding																	
	Extension N = 12			State & Dist. Supervisors N = 19			Secondary Teachers N = 44			State Coll. Professors N = 24			University Professors N = 11			Business N = 14		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
46 - Selecting appropriate single or double thread for hand stitching	100	0	0	89	11	0	91	7	2	100	0	0	91	9	0	85	15	0
47 - Using even basting with the same size stitches on both sides of fabric, just off the stitching line	75	0	25	56	17	28	57	14	30	58	21	21	64	9	27	64	7	29
48 - Using uneven basting with 1/2 inch stitches alternated with 1/8 inch stitches just off the stitching line	64	9	27	50	11	39	27	37	36	38	33	29	64	27	9	43	14	43
49 - Using diagonal basting with diagonal stitch seen from the right side & vertical stitch from the wrong side	36	46	18	22	56	22	21	57	23	29	58	13	18	73	9	46	39	15
50 - Using slip basting with 1/4 inch stitch taken along the fold of upper section, then stitch into the seam-line of the under section	46	36	18	39	55	6	32	52	16	42	46	12	36	64	0	62	23	15
*51 - Correctly determining length for a garment	100	0	0	100	0	0	84	11	5	100	0	0	100	0	0	85	15	0
*52 - Trimming hem allowance so that it is uniform in width	100	0	0	100	0	0	89	11	0	100	0	0	100	0	0	85	15	0
53 - Clean finishing & hemming a shaped skirt, easing fullness onto tape	91	0	9	90	10	0	81	17	2	92	4	4	91	0	9	85	15	0

TABLE XII (Continued)

Competency	Percent Responding														
	Extension			State & Dist. Supervisors			Secondary Teachers			State Coll. Professors			University Professors		
	N = 12			N = 19			N = 44			N = 24			N = 11		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
54 - Hemming using a fusible product as a substitute	73	18	9	47	32	21	44	47	9	13	33	54	10	30	60
55 - Slip stitching taking small stitch of garment then slip needle into fold of hem 1/4 inch, proceed	91	0	9	90	10	0	86	9	5	83	13	4	90	0	10
56 - Catch stitching working left to right small X's about 3/8 to 1/2 inch, uniform size	50	50	0	53	47	0	46	50	4	46	50	4	55	45	0
57 - Using invisible or running hemming stitch with stitches taken between two fabrics on underneath side	91	9	0	84	16	0	68	27	5	71	29	0	91	9	0

1 - Taught in beginning college clothing construction; 2 - Taught in other course; 3 - Considered not important to learn  
 \*100% agreement for inclusion in beginning clothing construction by 4 or more groups

as a substitute" in the "not important to learn" column. This is in contrast to the other groups fairly consistent choices of placing it in the beginning course.

The four competencies concerning basting stitches had more disagreement on their placement than the other competencies. Hemming using a fusible product and catch stitch had similar responses. Approximately a fifth or more (20 - 31 percent) responses indicated that even basting should not be taught in beginning clothing construction perhaps because of the faster methods available or greater sewing machine flexibility and student proficiency.

Table XIII gives data concerning preparation and hand stitches in beginning clothing construction. All of the competencies except--

Competency 49 - "Using diagonal basting with diagonal stitch seen from right side and vertical stitch from wrong side"

Competency 50 - "Using slip basting with 1/4 inch stitch taken along the fold of upper section, then stitch into the seamline of the under section"

received a majority of responses for inclusion in beginning clothing construction. These two competencies received a majority of responses in favor of being taught in some other course.

#### Competencies Concerning Fasteners

Table XIV, page 64, indicates responses of the six groups on competencies concerning fasteners. Two groups, Extension and University Professors, are in 100 percent agreement on including the following competencies in beginning clothing construction:

TABLE XIII

PERCENT OF AGREEMENT ON COMPETENCIES CONCERNING PREPARATION AND  
HAND STITCHES IN CLOTHING CONSTRUCTION BY SIX GROUPS

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
100%	46* 51 52	51 52		46 41 52	51 52	
90%	53 55 57	53 55	46	53	46 53 57 55	
80%		46 57	52 55 51 53	55		46 51 52 53
70%	47 54			57		54 55
60%	48		57		47 48	47 50
50%	56	47 56 48	47	47	69 50	56
Below 50%	50 49	54 50 49	56 54 50 48 49	56 50 48 49 54	49 54	49 57 48

\*Refers to number of competency identified on questionnaire

TABLE XIV  
RESPONSES OF THE SIX GROUPS ON COMPETENCIES  
CONCERNING FASTENERS

Competency	Percent Responding														
	Extension N = 12			State & Dist. Supervisors N = 19			Secondary Teachers N = 44			State Coll. Professors N = 24			University Professors N = 11		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
58 - Attaching snaps which are concealed, ball on top, using buttonhole stitch	100	0	0	79	21	0	84	16	0	92	4	4	100	0	0
59 - Attaching hooks and eyes using button hole stitch, with hook lapped over eye 1/8 inch, shank retained	100	0	0	95	5	0	84	16	0	92	4	4	100	0	0
60 - Attaching buttons, 1/8 inch shank retained, wrapped with thread in lock stitch	100	0	0	95	5	0	73	27	0	92	8	0	100	0	0
51 - Applying invisible zipper using manufacturer's instructions	64	36	0	84	16	0	64	32	4	50	39	12	55	36	9
*62 - Applying a lapped zipper, concealed 1/2 inch lap extended over zipper 1/8 inch, straight uniform stitching	100	0	0	84	16	0	91	9	0	100	0	0	100	0	0
63 - Making a machine worked buttonhole 1/8 inch to right of CF, on grain, evenly spaced, uniform & proper size	100	0	0	90	10	0	77	23	0	87	9	4	90	0	10
64 - Making a looped buttonhole with uniform piping & spaced evenly, slightly larger than a ball button	36	55	9	26	63	11	21	77	2	17	70	13	18	55	27

TABLE XIV (Continued)

Competency	Percent Responding																	
	Extension N = 12			State & Dist. Supervisors N = 19			Secondary Teachers N = 44			State Coll. Professors N = 24			University Professors N = 11			Business N = 14		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
65 - Making a bound buttonhole which is 1/4 inch wide, even straight lips, square corners, mouthline closed, neatly finished on underneath	18	82	0	16	84	0	23	77	0	42	58	0	27	73	0	50	50	0

1 - Taught in beginning college clothing construction course; 2 - Taught in other course; 3 - Considered not important to learn  
 \*100% agreement for inclusion in beginning clothing construction by 3 groups

- 58 - Attaching snaps which are concealed, ball on top, and using buttonhole stitch
- 59 - Attaching hooks and eyes using button hole stitch, with hook lapped over eye 1/8 inch, shank retained
- 60 - Attaching buttons, 1/8 inch shank retained, wrapped with thread in lock stitch

More than 62 percent from the other groups agreed on placing these competencies in beginning clothing construction.

Competency 61 - "Applying invisible zipper using special foot and directions according to manufacturer" had at least 50 percent or more of all the groups indicating that it should be included in beginning clothing construction. All of the groups indicated by at least 16 percent the competency might be included in some other course. Since the invisible zipper is a relatively new innovation further study might be given this competency for its importance in beginning clothing construction.

Three groups were in 100 percent agreement that Competency 62 - "Applying a lapped zipper" should be included in beginning clothing construction. More than 79 percent of the other groups agreed also.

Only one group, Extension, was in 100 percent agreement in placing Competency 63 - "Making a machine worked buttonhole" in beginning clothing construction. At least 64 percent of each group also favored placing it in that course. The Secondary Teachers and the Business group had similar percentages (one-half to one-third) indicating this competency should be placed in some other course. Ten percent of the University Professors thought this competency unimportant to learn.

All the groups indicate Competency 64 - "Making a looped button-hole" and Competency 65 - "Making a bound buttonhole" should not be included in beginning clothing construction but in some other course. The Business group showed a tie in placing Competency 65 in the first two columns indicating its inclusion in either beginning clothing construction or some other course. Perhaps they think with the available guides, equipment, etc., now on the market it is not as complicated to make bound buttonholes as it once was.

On Table XIV, only the business group had consistently more variation in the choices than the other groups.

Table XV is presenting data on fasteners. The Home Economists in Extension Group and University Professors Group had more competencies with 100 percent agreement favoring inclusion in beginning clothing construction than did the other groups. Competency 64 - "Making looped buttonhole with uniform piping and spaced evenly, slightly larger than ball button" and Competency 65 - "Making bound buttonhole which is 1/4 inch wide, even straight lips, square corners, mouthline closed, neatly finished on underneath" were agreed upon by 50 percent of all groups for not including it in beginning clothing construction. Therefore, they could be included in some other course.

#### Competencies Concerning Miscellaneous Items

Table XVI, page 69, presents the data relating to miscellaneous items.

Competency 66 - "Cutting a bias" and Competency 67 - "Piecing a true bias" all the groups' choices were fairly consistent.

TABLE XV  
PERCENT OF AGREEMENT ON COMPETENCIES CONCERNING  
FASTENERS BY SIX GROUPS

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
100%	58* 59 60 62 63			62	58 59 60 62	
90%		59 60 63	62	58 59 60	63	
80%		61 62	58 59	63		
70%		58	63 60			62 60 61
60%	61		61			59 63 58
50%				61	61	65
Below 50%	64 65	64 65	65 64	65 64	65 64	64

\*Refers to number of competency identified on questionnaire

TABLE XVI  
RESPONSES OF THE SIX GROUPS ON COMPETENCIES  
CONCERNING MISCELLANEOUS ITEMS

Competency	Percent Responding																	
	Extension N = 12			State & Dist. Supervisors N = 19			Secondary Teachers N = 44			State Coll. Professors N = 24			University Professors N = 11			Business N = 14		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
66 - Cutting a bias with lengthwise & cross wise grainline meeting at right angles	73	27	0	78	22	0	80	20	0	88	8	4	82	18	0	71	29	0
67 - Piecing a true bias with seam stitching on grain	73	27	0	67	33	0	68	32	0	88	12	0	64	36	0	64	36	0
68 - Making a belt (style depending on current fashion)	36	46	18	35	59	6	32	59	9	54	38	8	18	73	9	50	50	0
69 - Applying ribbing to neckline or sleeve achieving the correct proportion of stretch, having fullness smoothly eased in, seams overcast	27	73	0	37	58	5	27	68	5	9	77	14	10	70	20	29	71	0

1 - Taught in beginning college clothing construction course; 2 - Taught in other course; 3 - Considered not important to learn

Seventy-one percent indicated that Competency 66 should be included in beginning clothing construction and 64 percent indicated Competency 67 should be in beginning clothing construction.

The majority of the groups felt Competency 68 - "Making a belt" should be included in some other course rather than the beginning clothing construction. Only 18 percent indicated it should be in beginning clothing. The business group had a 50-50 percent response in placing it in beginning clothing construction or some other course. Again they as a group might feel there are easier aids on the market now to make fashionable belts.

On Competency 69 - "Applying ribbing to neckline or sleeve" all of the groups agreed that it should not be placed in beginning clothing construction, but rather some other course. The State College and University Professors had 14 and 20 percent, respectively, in their groups choosing the not important to learn column. This might lend itself to study on who is currently using the ribbing which is now available.

Table XVI concerning miscellaneous items had more choices in all three columns than any other table. This might indicate uncertainty by the respondents on the importance of these miscellaneous items.

Table XVII, page 71, the percent of agreement on competencies concerning miscellaneous items by six groups is presented. All of the groups except state and district supervisors listed competencies 66 through 69 in the same order. The state and district supervisors reversed the ranking of the last two competencies--Competency 68 - "Making a belt" and Competency 69 - "Applying ribbing to neckline

TABLE XVII  
PERCENT OF AGREEMENT ON COMPETENCIES CONCERNING  
MISCELLANEOUS ITEMS BY SIX GROUPS

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
100%						
90%						
80%			66*	66 67	66	
70%	66 67	66 67				66
60%			67		67	67
50%				68		68
Below 50%	68 69	69 68	68 69	69	68 69	69

\*Refers to number of competency identified on questionnaire

or sleeve achieving the correct proportion of stretch, having fullness smoothly eased in, seams overcast" received the majority of responses in favor of teaching it in some other course.

### Interpretation of the Findings

A majority of responses (over 50 percent) rounded to the nearest whole number was arbitrarily set by the researcher as cut off mark for inclusion of a competency in beginning clothing construction. The percent of responses for each group were added together and divided by six to obtain an average of percents. Table XVIII presents the order of the 69 competencies ranked by average percent by groups who indicated whether the competency should be in beginning clothing construction.

Fifty-two of the 69 clothing construction competencies based upon analysis by percentages of more than 50 percent were identified for inclusion in a beginning clothing construction course by the six different groups of educators. Seventeen of the competencies had agreement among the six groups that the particular competencies should be taught in some other course rather than the beginning course. The lists of competencies is presented on pages 78-82.

All competencies in the categories of selection, cutting and marking of fabric, operation of the sewing machine, seams and seam finishes had a majority of responses for their inclusion in beginning clothing construction. The competencies considered not essential in beginning clothing were relocating darts, applying fusible and hair canvas interfacing, diagonal and slip basting, applying welt pocket, bound and looped buttonholes, making fake cuffs, belt and

TABLE XVIII

ORDER OF THE SIXTY-NINE COMPETENCIES RANKED BY AVERAGE PERCENT  
OF GROUPS WHO INDICATED WHETHER THE COMPETENCY SHOULD BE  
IN THE BEGINNING CLOTHING CONSTRUCTION COURSE

Rank	Competency	*Ave. %	Rank	Competency	*Ave. %
1	21.** Use correct tension and stitch size	99.2	13	52. Trim hem allowance	94.3
2	1. Select appropriate & compatible pattern & fabric	98.4	15	15. Alter sleeve length	93.5
3	44. Use proper pressing techniques	98.4	15	3. Follow pattern direction sheet	93.5
4	5. Properly cut and match where necessary	97.6	17	51. Determine length for garment	92.7
5	29. Stitch darts using directional stitching--last stitches on folded edge	96.7	17	38. Set in sleeve	92.7
6	19. Operate the sewing machine	95.9	19	46. Select thread for hand stitching	92.6
6	14. Alter length	95.9	20	62. Apply concealed lap zipper	91.9
6	36. Understitch	95.9	21	30. Attach bodice to skirt	91.8
6	4. Prepare fabric, correctly place and fasten pattern	95.9	22	35. Grade and layer enclosed seams	91.1
10	2. Select matching thread and other necessary findings	95.1	22	31. Apply proper interfacing	91.1
10	28. Stay stitch using directional stitching	95.1	24	34. Apply facing	89.1
12	25. Make a plain seam	94.4	25	22. Clean and oil sewing machine	89.1
13	12. Alter waist line	94.3	26	59. Attach hooks and eyes	88.6
			27	13. Alter hipline	87.8
			28	53. Clean finish and hem a shaped skirt	86.7
			29	24. Use machine zigzag	86.3
			30	7. Mark with tracing wheel and paper	86.0

TABLE XVII (Continued)

Rank	Competency	*Ave. %	Rank	Competency	*Ave. %
31	55. Slip stitch	85.8	47	6. Make tailor tacks	62.0
32	60. Attach buttons	85.4	48	47. Use even basting	60.2
32	58. Attach concealed snaps	85.4	49	42. Construct traditional cuffs	56.1
34	11. Alter bust line	84.6	50	26. Make a flat fell seam	54.5
35	23. Make a clean finished edge	82.9	51	8. Mark with pins or soap	53.3
36	63. Make machine worked buttonhole	82.4	52	27. Make a French seam	51.2
37	37. Face & attach collar	82.1	53	56. Catch stitch	48.8
38	10. Alter shoulder	80.5	54	40. Apply pocket in seam	45.5
39	66. Cut a bias	79.5	55	32. Apply fusible interfacing	44.6
40	20. Use 2 attachments	76.7	56	54. Hem using fusible product	41.7
41	57. Use invisible or running hemming stitch	73.0	57	18. Relocate darts by slash & spread method	41.1
42	67. Piece a true bias	71.3	58	48. Use uneven basting	41.0
43	9. Alter neck line	68.3	59	50. Use slip basting	39.7
44	16. Alter sleeve girth	65.9	60	17. Relocate darts by pivot method	42.1
45	61. Apply invisible zipper	64.2	61	68. Make a belt	38.0
46	39. Apply patch pocket	63.3	62	43. Use fake cuffs	36.4

TABLE XVIII (Continued)

Rank	Competency	*Ave. %	Rank	Competency	*Ave. %
63	65. Make bound buttonhole	28.5			
64	45. Line a garment	27.6			
65	49. Use diagonal basting	26.4			
66	64. Make looped buttonhole	24.6			
67	69. Apply ribbing to neckline or sleeve	24.2			
68	33. Apply hair canvas interfacing	15.7			
69	41. Apply welt pocket	15.6			

\*Average percent was calculated by adding percent for each group and dividing by six.

\*\*Refers to original numbering of competencies on questionnaire.

applying ribbing, and lining a garment. The Business group and Secondary Homemaking Teachers had more diversity in responses than did the other groups.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

This study was designed to identify the competencies considered important by a group of educators for inclusion in beginning clothing construction for college level. The list of clothing construction competencies identified can be used as a basis for recommending implementation of competency based education in the clothing construction area. Also, these competencies can be used as a basis for evaluating the present courses at various institutions and to enrich and strengthen them.

The data for the study were collected by a questionnaire designed to identify the competencies necessary in beginning clothing construction for college level. This was mailed to 224 participants in six categories: (1) Clothing Specialists in Extension; (2) State and District Supervisors in Home Economics Education; (3) Secondary Vocational Homemaking Teachers; (4) Clothing Professors in State Colleges; (5) Clothing Professors in Universities; and (6) Home Economists in Business. The first four groups of educators were chosen from the Southwest region of the United States. The region included the states of Oklahoma, Texas, Arkansas, Louisiana and New Mexico. The fifth category was comprised of ten universities across the

United States with the highest enrollments in Home Economics in 1964. The sixth group included businesses across the United States which hire home economists to demonstrate and/or promote products used in clothing construction.

The data were analyzed by figuring the average percent for all the groups on each competency. To find this average the percent of responses for the six groups were added together and divided by six. The researcher arbitrarily set the point of cut off at 50 percent and higher for including the competency in beginning clothing construction.

### Conclusions

Using the 50 percent as an indicator, 52 competencies were identified which should be included in beginning clothing construction. Seventeen competencies were identified to be included in some course other than beginning clothing construction.

Fifty-two competencies which were considered important by a group of educators to be included in beginning clothing construction at the college level are listed below.

### Competencies

#### Selection, Cutting and Marking

1. Selecting appropriate and compatible pattern and fabric
2. Selecting matching thread and other findings
3. Following the pattern directions sheet
4. Preparing fabric, correctly place and fasten pattern on fabric
5. Properly cutting and matching where necessary

6. Making tailor tacks using double thread through the pattern and two layers of fabric
7. Marking with tracing wheel and paper with straight single line invisible on fabric
8. Marking with pins or soap pushing pins through two layers of fabric and pattern

#### Alterations

Make appropriate alterations in the following locations when necessary

9. Neckline
10. Shoulder
11. Bust line
12. Waist line
13. Hip line
14. Length
15. Sleeve length
16. Sleeve girth

#### Operation of the Sewing Machine

17. Operating the sewing machine
18. Using at least two attachments
19. Using correct tension and stitch size on machine
20. Properly cleaning and oiling the machine

#### Seams and Seam Finishes

21. Making a clean finished edge which is turned under 1/4 inch stitched 1/16 inch from folded edge
22. Using machine zig zagging which is flat, smooth and even in width
23. Making a plain seam which is flat, uniform in width and true in line
24. Making a flat fell seam with two lines of stitching right side, spaced about 3/8 inch wide
25. Making a French seam which is completely enclosed, 3/8 inch wide

#### Construction Processes

26. Stay stitching using directional stitching on all off grain seams
27. Stitching darts using directional stitching with last few stitches on the folded edge
28. Attaching bodice to skirt evenly matching sides, CB, CF and using uniform seams
29. Applying facing with outer edge treated properly, seams trimmed, understitched, tacked or stitched in the well of the seam

30. Grading and layering enclosed seams
31. Understitching with stitching close to well of seam through facing and two thicknesses of seams
32. Facing a collar and attaching it evenly, balance, smooth, free from wrinkles, fullness eased to roll
33. Setting in a sleeve which is inconspicuous, smooth, fullness evenly distributed, hangs straight, free from gathers
34. Applying a patch pocket which is uniform in size, shape, top stitched and reinforced at the top
35. Constructing traditional cuffs, interfaced, uniform size, turned back and stitched in seams
36. Using fake cuffs which are topstitched 1/4 inch from edge, raw edge caught inside
37. Using proper pressing techniques

#### Preparation and Hand Stitches

38. Selecting appropriate single or double thread for hand stitching
39. Using even basting with the same size stitches on both sides of fabric, just off the stitching line
40. Correctly determining length for a garment
41. Trimming hem allowance so that it is uniform in width
42. Clean finishing and hemming a shaped skirt, easing fullness onto tape
43. Slip stitching taking small stitch of garment then slip needle into fold of hem 1/4 inch, proceed
44. Using invisible or running hemming stitch with stitches taken between two fabrics on underneath side

#### Fasteners

45. Attaching snaps which are concealed, ball on top, and using buttonhole stitch
46. Attaching hooks and eyes using buttonhole stitch, with hook lapped over eye 1/8 inch, shank retained
47. Attaching buttons, 1/8 inch shank retained, wrapped with thread in lock stitch
48. Applying invisible zipper using special foot and directions according to manufacturer
49. Applying a lapped zipper, completely concealed, 1/2 inch lap extended over zipper 1/8 inch, straight uniform stitching
50. Making a machine worked buttonhole 1/8 inch to right of CF, on grain, evenly spaced, uniform and proper size

#### Miscellaneous

51. Cutting a bias with lengthwise and crosswise grainline meeting at right angles
52. Piecing a true bias with seam stitched on grain

The six groups agreed seventeen of the competencies should be taught in some course other than beginning clothing construction.

Those 17 competencies were:

- Competency 17 - Relocating darts by the pivot method
- Competency 18 - Relocating darts by the slash and spread method
- Competency 32 - Applying a fusible interfacing
- Competency 33 - Applying hair canvas interfacing in proper locations
- Competency 40 - Applying a pocket in a seam which is inconspicuous, flat, smooth
- Competency 41 - Applying a welt pocket which is smooth, flat, straight, uniform size and square corners
- Competency 43 - Using fake cuffs which are topstitched 1/4 inch from edge, raw edge caught inside
- Competency 45 - Lining a garment using appropriate applications
- Competency 48 - Using uneven basting with 1/2 inch stitches alternated with 1/8 inch just off the stitching line
- Competency 49 - Using diagonal basting with diagonal stitch seen from right side and vertical stitch from the wrong side
- Competency 50 - Using slip basting with 1/4 inch stitch taken along the fold of upper section, then stitch into the seamline of the under section
- Competency 54 - Hem using a fusible product as a substitute
- Competency 56 - Catch stitching working left to right, small X's about 3/8 inch to 1/2 inch, uniform size
- Competency 64 - Making looped buttonhole with uniform piping and spaced evenly, slightly larger than a ball button
- Competency 65 - Making a bound buttonhole which is 1/4 inch wide, even straight lips, square corners, mouth-line closed, neatly finished on underneath

Competency 68 - Making a belt (style depending on current fashion)

Competency 69 - Applying ribbing to neckline or sleeve achieving the correct proportion of stretch, having fullness smoothly eased in, seams overcast

There were no competencies on the questionnaire that all six groups thought were unimportant to learn.

### Recommendations

The following recommendations are made:

1. Replicate the study with the following expansions:
  - a. identify competencies for other clothing construction courses
  - b. using educators from other regions, do a follow-up study to test consistency of choices in identifying competencies for clothing construction
2. Develop learning packages for individual study in the process of implementing a competency based education class in beginning clothing construction.
3. Use the 52 identified clothing construction competencies to implement a competency based class in beginning clothing construction at the college level.
4. Use competencies which were identified as a checking device for evaluating content of courses in transferring credits from various institutions and for evaluation of beginning clothing construction in colleges.

Competencies in clothing construction should be reviewed often and kept up to date with the new technology of the clothing and

textiles industries. Without periodic evaluation clothing construction courses rapidly become outmoded. The sewing equipment, fabric and notions change often and much research should be done in keeping construction techniques up to date. It is very important to continually investigate the competencies in clothing construction and keep the courses relevant.

## A SELECTED BIBLIOGRAPHY

- "Accreditation Policies and Procedures." Washington, D. C.: American Home Economics Association, 1970.
- Alexander, Margaret. "A Reassessment of the Purposes of the Seminar on Concepts." Proceedings . . . Clothing and Textiles Seminar. Manhattan, Kansas: Kansas State University, 1966, p. 65.
- American Home Economics Association. "Home Economics--New Directions--A Statement of Philosophy and Objectives." Prepared by the Committee on Philosophy and Objectives of the American Home Economics Association. Washington, D. C.: American Home Economics Association, 1959.
- American Home Economics Association Accreditation Committee. "Accreditation and Home Economics." Washington, D. C.: American Home Economics Association, 1964.
- Army, Clara Brown. Evaluation in Home Economics. New York: Appleton-Century-Crofts, 1953.
- Barlow, Mel, Director. "Competency Based Education." Division of Vocational Education, University of California, 1969.
- Berry, Jane C. "A Revision and Development of a Clothing Pre-test for Appraising Competencies of First Year Clothing Students." (Unpublished Master's thesis, Oklahoma State University, 1963).
- Bowles, F. Douglas. "Competency-Based Teacher Education: The Houston Story." Educational Leadership, Vol. 30, No. 6 (March, 1973), pp. 510-12.
- Briggs, Lloyd. A paper presented at the Conference on Competency-Based Vocational Teacher Education, Arlington, Texas, October 2, 1972.
- Burke, Caseel. "Performance Based Teacher Education Series." American Association of Colleges for Teacher Education. Washington, D. C., 1972.
- Burns, Richard W. "Achievement Testing in Competency-Based Education." Educational Technology, Vol. 12, No. 2 (November, 1972), pp. 39-42.

- Burns, Richard W. "Behavioral Objectives for Competency-Based Education." Educational Technology, Vol. 12, No. 2 (November, 1972), pp. 22-5.
- Campbell, J. P. et al. "Development and Evaluation of Behaviorally Based Rating Scales." Journal of Applied Psychology, Vol. 57 (February, 1973), pp. 15-22.
- Collins, Mildred Hart. "A Pretest for Placement in Beginning Clothing Courses at Southern Illinois University." (Unpublished research report, Southern Illinois University, August, 1956).
- "Competency or Performance-Based Instruction Programs." (Adapted from presentations made by selected members of the Department of Vocational and Applied Arts Education, Wayne State University at the 1971 National American Vocational Association Conference).
- Cooper, James M. "Specifying Teacher Competencies." Journal of Teacher Education, Vol. 24, No. 1 (Spring, 1973), pp. 17-23.
- Corman, M. N. "Testing the Occupational Competency of T and I Teachers." American Vocational Journal, Vol. 48 (January, 1973), pp. 104-7.
- Cornwell, Robert C. and Karen Fraser. "Prepare Students for Performance Appraisal." Journal of Business Education, Vol. 44 (April, 1969), pp. 277-8.
- Davis, Bernice Ethel. "Self-Instruction for Clothing Techniques: Comparison of Two Programs." (Unpublished Master's thesis, Ohio State University, Columbus, Ohio, 1969).
- Dressel, Paul. College and University Curriculum. Berkeley: McCutcheon Publishing Corporation, 1969.
- Ettle, Dorothy Anne. "Clothing Construction Practices of Clothing and Textiles Majors and of Home Economics Education Majors at Texas Technological University." (Unpublished Master's thesis, Texas Technological University, 1969).
- Gaffney, Doreatha E. "The Development and Evaluation of Programmed Instructional Components for Selected Concepts in a College Textiles Course." (Unpublished Ed. D. dissertation, Oklahoma State University, 1971).
- Good, Carter V., ed. Dictionary of Education. New York: McGraw-Hill Book Co., Inc., 1959.
- Gould, Grovalynn Foreman. "A Performance Pretest for Placement of College Students in Beginning Clothing Courses." (Unpublished Master's thesis, Oklahoma State University, 1963).

- Houston, Robert W. and Robert B. Howsam. Competency-Based Teacher Education, Progress, Problems, & Prospects. Chicago: Science Research Association, Inc., 1972.
- Klingstedt, Joe Lars. "Learning Modules for Competency-Based Education." Educational Technology, Vol. 12, No. 2 (November, 1972), pp. 29-31.
- Knoll, Marjorie. "Home Management Theory and Practice: Intergration or Interaction." Journal of Home Economics, Vol. 63, No. 6 (February, 1971), pp. 89-92.
- Krathwohl, David R., B. S. Bloom, and B. Masia. Taxonomies of Educational Objectives: Handbook II: Affective Domain. New York: David McKay Company, 1964.
- Lee, J. A., and P. L. Dressel. Liberal Education and Home Economics. New York: Bureau of Publications, Teachers College, Columbia University, 1963.
- Mager, Robert F. Preparing Instructional Objectives. Palo Alto, California: Fearon Publishers, 1962.
- Mather, Mary. "What Will the Seventies Require of Home Economics?" Illinois Teacher, Vol. 14, No. 3 (January/February, 1971), p. 102.
- McGrath, Earl J. The Changing Mission of Home Economics. Columbia: Teachers College Press, 1968.
- Montague, Eard J. and John J. Koran, Jr. "Behavioral Objectives and Instructional Design: An Elaboration." The Science Teacher, (March, 1969), pp. 76-8.
- Morrison E. J. "Pass or Fail: How to Test Performance." American Vocational Journal, Vol. 48 (April, 1973), pp. 38-9.
- Pressey, S. L. "A Simple Apparatus Which Gives Tests and Scores--and Teaches." Teaching Machines and Programmed Learning. Washington, D. C.: National Education Association, 1960.
- "71-72 AHEA Actions." Journal of Home Economics, Vol. 64, No. 6 (September, 1972), pp. 58-9.
- Smith, Eugene R., Ralph W. Tyler, and the Evaluation Staff. Appraising and Recording Student Progress. New York and London: Harper and Brothers, 1942.
- Taba, Hilda. Curriculum Development. New York: Harcourt, Brace and World, Inc., 1962.

- Tyler, Ralph W. Basic Principles of Curriculum Development. Chicago: University of Chicago Press, 1950.
- Vermilyea, Jewell G. "Relative Merit of Two College Courses in Clothing Construction." (Unpublished Master's thesis, Iowa State University, 1967).
- Walsh, Grace M. "The Development of a Pencil and Paper Pre-test for Placement of College Students in First Course in Clothing, Textiles, and Merchandising at Oklahoma State University." (Unpublished report, Oklahoma State University, 1959).
- Wilbur, June. "Creative Talents in Textiles and Clothing are Encouraged by New Educational Instrument." Journal of Home Economics, Vol. 58, No. 4 (April, 1966), p. 267.
- Witt, Mildred Rea. "The Revision and Development of Selected Evaluation Devices for Appraising Certain Clothing Competencies." (Unpublished Ed. D. dissertation, Oklahoma State University, 1961).
- Wright, Janet Smith and Jean Henkel. "Achievement in Clothing Construction." Journal of Home Economics, Vol. 43, No. 8 (October, 1951), pp. 626-8.
- Young, Jon I. and Adrian P. Van Mondfrans. "Psychological Implication of Competency-Based Education." Educational Technology, Vol. 12, No. 2 (November, 1972), pp. 15-7.

APPENDIX A  
QUESTIONNAIRE



- \_\_\_\_\_ 39. Apply patch pocket which is uniform in size, shape, top stitched & reinforced at top  
 \_\_\_\_\_ 40. Apply pocket in seam which is inconspicuous, flat, smooth  
 \_\_\_\_\_ 41. Apply welt pocket which is smooth, flat, straight, uniform size, square corners  
 \_\_\_\_\_ 42. Construct traditional cuffs, interfaced, uniform size, turned back & stitched in seams  
 \_\_\_\_\_ 43. Use fake cuffs which are topstitched 1/4" from edge, raw edge caught inside  
 \_\_\_\_\_ 44. Use proper pressing techniques  
 \_\_\_\_\_ 45. Line a garment using appropriate application

#### PREPARATION AND HAND STITCHES

- \_\_\_\_\_ 46. Select appropriate single or double thread for hand stitching  
 \_\_\_\_\_ 47. Use even basting with same size stitches on both sides of fabric, just off the stitching line  
 \_\_\_\_\_ 48. Use uneven basting with 1/2" stitches alternated with 1/8", just off the stitching line  
 \_\_\_\_\_ 49. Use diagonal basting with diagonal stitch seen from right side & vertical stitch from wrong side  
 \_\_\_\_\_ 50. Use slip basting with 1/4" stitch taken along the fold of upper section, then stitch into the seamline of the under section  
 \_\_\_\_\_ 51. Correctly determine length for garment  
 \_\_\_\_\_ 52. Trim hem allowance so that it is uniform in width  
 \_\_\_\_\_ 53. Clean finish & hem a shaped skirt, easing fullness onto tape  
 \_\_\_\_\_ 54. Hem using a fusible product as a substitute  
 \_\_\_\_\_ 55. Slip stitch taking small stitch of garment then slip needle into fold of hem 1/4", proceed  
 \_\_\_\_\_ 56. Catch stitch working left to right, small X's about 3/8" to 1/2", uniform size  
 \_\_\_\_\_ 57. Use invisible or running hemming stitch with stitches taken between two fabrics on underneath side

#### FASTENERS

- \_\_\_\_\_ 58. Attach snaps which are concealed, ball on top, & using buttonhole stitch  
 \_\_\_\_\_ 59. Attach hooks & eyes using buttonhole stitch, with hook lapped over eye 1/8" shank retained  
 \_\_\_\_\_ 60. Attach buttons, 1/8" shank retained, wrapped with thread in a lock stitch  
 \_\_\_\_\_ 61. Apply invisible zipper using special foot and directions according to manufacturer  
 \_\_\_\_\_ 62. Apply lapped zipper which is completely concealed, 1/2" lap extended over zipper 1/8", straight uniform stitching  
 \_\_\_\_\_ 63. Make machine worked buttonhole 1/8" to the left of CF, on grain, evenly spaced, uniform & proper size  
 \_\_\_\_\_ 64. Make looped buttonhole with uniform piping and spaced evenly, slightly larger than button (ball)  
 \_\_\_\_\_ 65. Make bound buttonhole which is 1/4" wide, even straight lips, square corners, mouthline closed, neatly finished on underneath

#### MISCELLANEOUS

- \_\_\_\_\_ 66. Cut a bias with lengthwise & crosswise grainline meeting at right angles  
 \_\_\_\_\_ 67. Piece a true bias with seam stitched on grain  
 \_\_\_\_\_ 68. Make a belt (style depending on current fashion)  
 \_\_\_\_\_ 69. Apply ribbing to neckline or sleeve achieving the correct proportion of stretch, having fullness smoothly eased in, seams overcast

Please list other competencies you believe are necessary in a beginning clothing construction college course

#### 70. Please check the category in which you are currently employed:

- |   |   |
|---|---|
| _____ (1) Clothing Specialist in Extension                    | _____ (4) Clothing Professor in State College |
| _____ (2) State & District Supervisor in Home Economics Educ. | _____ (5) Clothing Professor in University    |
| _____ (3) Secondary Homemaking Teacher                        | _____ (6) Home Economics Educator in Business |

It is not necessary for you to sign the questionnaire but if you would like to have a summary of the results of this study please include your name and address in the following spaces.

\_\_\_\_\_ (name) \_\_\_\_\_ (address)  
 \_\_\_\_\_ (city) \_\_\_\_\_ (state) \_\_\_\_\_ (zip)

## APPENDIX B

### LIST OF REFERENCES USED DESIGNING QUESTIONNAIRE

LIST OF REFERENCES USED DESIGNING  
QUESTIONNAIRE

Textbooks

- Bane, Allyne. Creative Clothing Construction. New York: McGraw-Hill Book Company, 1973.
- Doerr, Catherine M. Smart Sewing. New York: The Macmillan Company, 1967.
- Erwin, Mabel D., and Lila A. Kinchen. Clothing for Moderns. New York: The Macmillan Company, 1969.
- Mansfield, Evelyn A. and Ethyl L. Lucas. Clothing Construction. Boston: Houghton Mifflin Company, 1960.
- McCall's Step by Step Sewing Book. New York: McCall Corporation, 1967.
- Minott, Jan. Coordinated Pattern Fit. Burgess Publishing Company, 1969.
- Reich, Naomi, Mark Berman, and Margaret Hagar. Essentials of Clothing Construction. New York: Meridith Corporation, 1967.
- Reynard, Pauline, Editor. Vogue Sewing Book. New York: Butterick Company, Inc., 1964.
- The Answer Book, McCall's Guide to Carefree Sewing. New York: McCall's Corporation, 1971.
- Simplicity Sewing Book. Simplicity Pattern Company, Inc., 1971.
- Wold, Blanche. A Unit Method of Sewing. Iowa: Wm C. Brown Company Publishers, 1968.

Magazines

- Journal of Home Economics
- What's New in Home Economics
- Forecast for Home Economics

## APPENDIX C

### COVER LETTER

## COVER LETTER

As part of my doctoral research at Oklahoma State University, I am conducting an investigation of the clothing construction competencies considered essential in the beginning clothing course at the undergraduate level. Upon proper identification of these competencies I plan to make some recommendation for implementing competency based education in the first or beginning clothing construction course.

Will you please serve as a member of my group of educators to react to the enclosed questionnaire? If you are willing, please check the appropriate column in which course you think the specific competency should be placed for mastery by college level students.

Your suggestions will be most valuable because of your professional training and experience. Enclosed is a self-addressed stamped envelope for your convenience in returning the completed instrument. I would appreciate having your responses returned by Monday, December 3, 1973.

Thank you so much for your thoughtful reactions to the statements.

Sincerely,

Ms. Keren Miller  
Graduate Student

Dr. Elaine Jorgenson  
(Major Adviser)  
Department of Home Economics  
Education

APPENDIX D

SECOND LETTER TO BUSINESSES

## SECOND LETTER TO BUSINESSES

Did you fail to return the questionnaire concerning the clothing construction competencies which I recently mailed you?

As your opinions will certainly strengthen my study I would appreciate your taking the time to fill it out and return it to me today.

If you have already mailed the original questionnaire, thank you and please disregard the extra copy and envelope.

Your cooperation will be greatly appreciated.

Sincerely,

Keren Miller, Graduate Student  
Oklahoma State University

## APPENDIX E

### LOCATION, DISTRIBUTION AND NUMBER OF EDUCATORS MAILED QUESTIONNAIRES

LOCATION, DISTRIBUTION AND NUMBER OF EDUCATORS  
MAILED QUESTIONNAIRES

Southwest Region						
Group	Okla.	Texas	Ark.	La.	New Mexico	Total
1 - Clothing Specialists in Extension	3	5	1	3	0	12
2 - State & District Supervisors in Home Economics Education	7	17	6	7	2	39
3 - Secondary Home-making Teachers	21	19	21	17	19	97
4 - Professors in State Colleges	5	19	6	6	5	41
Throughout the United States						
5 - Professors in Universities with Highest Enrollment in Home Economics in 1964						11
6 - Home Economists in Business						24
TOTAL						224

APPENDIX F

COMPLETE TABULATION OF CLOTHING CONSTRUCTION  
COMPETENCIES AS RESPONDED TO  
BY SIX GROUPS

COMPLETE TABULATION OF CLOTHING CONSTRUCTION COMPETENCIES  
AS RESPONDED TO BY SIX GROUPS

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
100% Agreement	1	1	0	1	1	1
	2	2		2	2	5
	3	3		4	5	12
	4	4		5	12	13
	5	5		12	14	14
	19	7		14	15	15
	21	19		15	21	21
	24	21		19	28	22
	25	25		21	29	34
	28	28		29	31	44
	29	29		36	34	
	31	30		46	36	
	34	36		51	37	
	35	44		52	38	
	36	51		62	44	
	38	52			51	
	44				52	
	46				58	
	51				59	
	52				60	
	58				62	
	59					
	60					
	62					
	63					
90% Agreement	11	12	1	5	3	2
	12	14	4	3	4	4
	13	22	5	7	7	11
	14	23	3	10	13	19
	15	24	14	13	19	20
	7	35	21	11	30	31

# APPENDIX F (Continued)

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
	22	38	19	23	35	29
	30	53	22	24	46	30
	53	55	44	30	53	35
	55	59	28	31	57	38
	57	60	29	34	55	
		63	36	37	63	
			38	44		
			46	28		
			62	35		
				38		
				53		
				58		
				59		
				60		
	10	15	2	55	10	3
	37	13	12	66	24	25
	20	11	15	67	66	28
	23	20	13	63		36
	46	37				46
	57	25				51
80%	61	24				52
Agreement	62	31				53
		30				
		35				
		34				
		52				
		55				
		51				
		53				
		58				
		59				

# APPENDIX F (Continued)

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
70% Agreement	16	6	7	9	11	9
	47	8	11	16	22	10
	6	16	10	22	23	23
	54	10	23	42		24
	66	31	37	52		42
	67	34	63			32
		39	60			45
		58				54
		66				55
						62
60% Agreement	18	9	9	20	6	7
	32	67	39	26	9	6
	48		57	27	16	16
	61		61	39	47	26
			67		48	37
					67	39
						47
						50
						59
						67
50% Agreement	9	18	6	8	18	17
	8	26	16	6	20	27
	26	27	17	40	26	40
	27	40	47	47	42	56
	39	43		61	56	65
	56	47		68	61	68
		56				
		48				

# APPENDIX F (Continued)

Percent of Agreement	Extension N = 12	State & Dist. Supervisors N = 19	Secondary Teachers N = 44	State Coll. Professors N = 24	University Professors N = 11	Business N = 14
	43	42	32	56	8	49
	50	54	42	50	17	57
	42	17	26	65	27	41
	40	50	27	48	39	48
	49	32	40	16	50	64
	64	69	56	43	32	43
	68	68	54	17	40	18
	17	45	8	18	45	33
	69	64	43	49	65	69
	33	49	18	32	49	
Below 50%	41	65	50	45	64	
Agreement	45	33	68	64	68	
	65	41	48	54	54	
			69	69	69	
			45	41	33	
			65	33	41	
			31		43	
			49			
			64			
			41			

VITA

Keren Payne Miller

Candidate for the Degree of

Doctor of Education

Thesis: AN IDENTIFICATION OF COMPETENCIES IN BEGINNING  
CLOTHING CONSTRUCTION FOR COLLEGE LEVEL

Major Field: Home Economics Education

Biographical:

Personal Data: Born at Thomas, Oklahoma, September 10, 1937,  
the daughter of Carl and Maurene Payne.

Education: Graduated from Thomas High School, Thomas, Oklahoma,  
in May, 1955; received Bachelor of Science in Education  
degree in Home Economics from Southwestern State College,  
Weatherford, Oklahoma, in May, 1959; received Master of  
Teaching degree in Counseling from Southwestern State  
College in 1966; completed requirements for the Doctor  
of Education degree in Home Economics from Oklahoma State  
University at Stillwater, Oklahoma, in December, 1974.

Professional Experience: Vocational Home Economics teacher at  
Canton, Custer, Clinton, Oklahoma, from 1959-1966; Instruc-  
tor in Home Economics, Southwestern State College, Weather-  
ford, Oklahoma, 1966-1972; Sabbatical leave of absence from  
Southwestern State College 1972-1973; Assistant Professor  
at Southwestern State College 1973-present.

Professional Associations: American Home Economics Association;  
Oklahoma Home Economics Association; Oklahoma Education  
Association; National Education Association; Kappa Kappa  
Iota.