

CLOTHING LABORATORY MANAGEMENT COMPETENCIES
NEEDED BY BEGINNING TEACHERS

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CHAPTER I

INTRODUCTION

One of the responsibilities of the Clothing, Textiles and Merchandising Department at Oklahoma State University is the preparation of students to teach clothing in secondary consumer and homemaking classes. Secondary consumer and homemaking teachers have responsibilities for clothing laboratories. Many teachers, especially beginning teachers, find that the noise level, the stress, the lack of work time, student demand for the teacher's time, and sewing machine problems contribute to making a clothing laboratory unmanageable at times.

Dolly and Meredith (1977) reported that instructional models often assume skills and knowledge on the part of teachers not normally provided in teacher education programs. Dunn (1979) substantiated their findings with her survey concerning clothing laboratory management problems. She indicated that approximately 50 percent or more of the teachers who responded had problems in most areas of clothing laboratory management. Home economics teacher educators at Oklahoma State University have indicated a need to provide a clothing laboratory management unit for prospective teachers.

Dunn (1979) identified problem areas which should be considered in the development of a clothing laboratory management unit for

prospective consumer and homemaking teachers. There is a need to identify and verify clothing laboratory management competencies needed by beginning home economics teachers in order to prepare a unit in clothing laboratory management which could be incorporated into present clothing classes at Oklahoma State University.

Purpose and Objectives

The purpose of the study was to investigate the relative importance of selected competencies in order to provide guidelines for developing a competency-based unit on clothing laboratory management to be included in clothing courses taken by students in the home economics teacher education program at Oklahoma State University.

Specific objectives of the study were to:

1. Identify the competencies in the area of clothing laboratory management needed by beginning Oklahoma vocational consumer and homemaking teachers.
2. Determine the relative importance of each competency based on input from Oklahoma vocational consumer and homemaking teachers who teach clothing.
3. Compare the perceptions of beginning clothing teachers with experienced clothing teachers regarding the importance of each competency.
4. Formulate guidelines to be used in developing a competency-based unit on clothing laboratory management to be included in clothing courses taken by students in the home economics teacher education program at Oklahoma State University.

Limitations

Participants in the study were limited to the Oklahoma vocational consumer and homemaking teachers of clothing during the spring of 1980.

Definition of Terms

The following are definitions of terms used in the study:

Beginning Teacher - A teacher who has taught less than one year.

Clothing Laboratory - Unit or area located in a teaching institution which provides space and equipment for the experimentation, manipulation and construction of clothing items (Dunn, 1979).

Competency - A general, student-oriented behavioral statement of a task requiring the mastery of performance objectives with no reference to conditions or criteria (Meszaros and Baird, 1979).

Experienced Teacher - A teacher who has taught more than one year.

Management - Planning the use of resources and then implementing the plans to meet demands (Deacon and Firebaugh, 1975).

Vocational Consumer and Homemaking Teachers of Clothing - Teachers certified to teach vocational consumer and homemaking education as defined in Public Law 90-576, who teach at least one clothing class during the school year.

CHAPTER II

REVIEW OF LITERATURE

The following literature review was intended to assist the reader in understanding principles related to the development of competencies in curriculum development and to areas of management that can be applied to clothing laboratory management. The discussion covered three areas. Section one consisted of a review of selected references relating to principles of management that apply to clothing laboratory management. The second section was directed toward competency-based curricula. Selected research related to clothing laboratory management problems was reported in the third section.

Laboratory Management

Silvius and Curry (1971) stated that many teachers have classroom management problems. They need to be better organized and to realize the need for making plans and then carrying out the plans. Some fail to see the need for clearly establishing direction and laboratory policy.

A clothing construction teacher, according to Burrows (1975), assumes the responsibility for efficiently operating and managing the clothing laboratory so the students can learn effectively and efficiently. The teacher is responsible for planning and organizing activities that take place while the student is in the laboratory.

Schlater (1967) defined the purpose of management as using resources to achieve goals or using what you have to get what you want. According to Gross, Crandall, and Knoll (1973), management occurs when some change is desired or required. They indicated that the managerial process requires many interrelated decisions.

Schlater (1967) identified the management process as having universal application wherever it occurs, whether applied to the home, to the firm, to the individual, or to schools. The process of management does not change; however the particular values, goals, resources, demands upon resources, and the quality of interaction that takes place as it is carried out does change.

The fundamental functions of management as identified by Terry (1972) are planning, organizing, actuating or doing, and controlling. These basics are performed by the manager, regardless of the type of enterprise, the major activity, or the level at which the manager works. Terry suggested that a manager must be flexible.

People, materials, equipment, and methods were identified by Rindt (1968) as manageable resources. He suggested that successful planning should begin with need determination. Plans are made in order to provide the proper direction for activities and to achieve goals. Silvius (1971) indicated that a plan was a scheme of action. He suggested taking one problem at a time, studying it and coming up with the best solution possible under existing conditions.

Gaffney (1962) recognized the need for teachers to plan carefully with thoughtful precision prior to the beginning of a unit. The time element in a clothing laboratory indicates a need for organization. There is very little time available during class time for

weighing possible alternatives.

According to Evans (1976), decisions are basic to the performance of all managerial functions. He stated that nothing takes place in any organization until decisions are made. The process of management is divided by Schlater (1967) into decision-making and decision-implementing. She described decision-making as recognizing the problem, seeking alternative solutions, analyzing the alternatives, and choosing one alternative to act on. Decision-implementing is heavily weighted with performance. Decision-implementing consists of assigning, delegating, actuating, guiding, and coordinating of a decision.

Planned activities were separated by Rindt (1968) into categories of those related to people (instructors and students) and those related to things (facilities, equipment, and material). He suggested that the instructor should delegate work such as positioning chairs, pencils, notepads, etc. to helpers. The instructor should concentrate on the role of instructor and provider of the necessary climate, with a personal touch, for student motivation and learning. Rindt further indicated that the learning process requires the best possible meeting environment and the proper supply and use of teaching materials.

Silvius (1971) recognized that teachers have had varying degrees of success in organizing an industrial arts laboratory for two or more major activities, depending upon their preparation, ability, and the physical setup of the laboratory. He suggested considering the following in planning a laboratory:

1. number of major activities to be carried on;
2. the maximum number of students in any one class;
3. essential tools and equipment;

4. floor space needed for each area;
5. required work stations;
6. storage facilities (Silvius, 1971, p. 83).

Silvius (1971) indicated that the layout of the laboratory should provide an easy place in which to work. There should be a systematic method for handling equipment and machines and a procedure for repair or replacement of equipment. The teacher should show concern for the development of student attitudes toward the care of equipment.

Silvius indicated that students should share in the responsibility for maintaining the tools and equipment in the laboratory. He indicated that the teacher cannot expect his students to be successful if they are using tools and machines that need repairing. The teacher is accountable for tools, taking and keeping inventories up to date, and closing the laboratory at the end of the school term. The teacher must also account for and control the distribution of supplies. Silvius suggested that all of this should be done with a minimum of time and energy.

Gross (1973) suggested that management can never be separated from the fact that it concerns people and is interwoven with group relations. Most, if not all, techniques of management will succeed or fail depending on the degree to which they fit the needs and interest of the group in which they are used. The group must always be the point of reference. Management is subordinate to satisfactory relationships within the group.

Competency-Based Curricula

Each profession is responsible for identifying the knowledge,

behaviors and skills needed by its practitioners. It is also responsible for developing a high level of competence in its training program.

Since the late 1960's, an approach known as competency-based education has emerged as a promising educational concept. Houston (1974) pointed out that many professions have turned to the competency-based approach to education and training. He listed accountability and personalization as two forces in American society today that have contributed to the development of competency-based education.

In order to identify competencies for teachers, Bell and Cummings (1976) suggested identifying the knowledge, skills, and behaviors needed by beginning teachers for entry level employment. Kohlmann (1975) recommended analyzing the following: teaching functions, clearly delineated concepts about teaching, available research findings, school curricula demands, and professional experience to document professional education competencies needed by beginning teachers.

According to Kohlmann (1975), in order for teachers to be competent they should have both knowledge and skill in subject matter as well as knowledge about the students, how they learn, and how they should be taught. They should be skillful in making professional decisions, be able to adjust to their profession, and be able to recognize and understand their feelings about it. Kohlmann further stated that competent teachers should perform professionally and technically in such a manner that they are acceptable members of their profession.

Competency-based teacher education was described by Morse and Terras (1977) as being a process in which persons come to understand

that various competencies are expected of them and then demonstrate that they have attained the competencies required. Meszaros and Baird (1979) agreed that competency-based education is simply the ability to perform identified competencies. Houston (1974) stated that competency-based education emphasizes a minimum standard for effective performance and it refers to ways in which a learner can be observed to demonstrate knowledge and skills.

The following format for stating competencies was recommended by Meszaros and Baird (1979, p. 10).

Competencies should:

1. be written in terms of the student;
2. be general;
3. identify the knowledge, behaviors, skills, or attitudes the student will have when completing the instruction;
4. use a verb to describe student outcomes;
5. not refer to conditions or criteria.

Related Research

Weber State College (Burke, 1972) recognized competency as the objective of teacher preparation. Their teacher education faculty developed individualized instructional modules into course blocks which were organized into systems for preparing elementary and secondary school teachers. The performance objectives specified both the expected behavior and the level of proficiency to be exhibited by the learner at the conclusion of the learning activity. The faculty members directed the assessment of the students' progress, assisted the students with their own assessments and evaluated the students on

completion of the modules. Changes were made both on the basis of the suggestions provided by the students and suggestions for upgrading the content on the part of the faculty members. Student and faculty reactions to these competency-based modules were overwhelmingly positive.

Witmer and Mortensen (1979) researched professional education competencies needed by beginning teachers of agriculture/agribusiness education in Pennsylvania as perceived by cooperating teachers, inexperienced teachers, intern teachers, state staff, and teacher educators. One hundred twelve competencies in the areas of management, guidance, school-community relations, and professional role and development were included in the study. The perceptions of the three groups of teachers, state staff, and teacher educators regarding the importance of each competency were compared and found to be primarily the same. They found teacher educators placed more emphasis on the importance of professional education competencies than did the state staff or the teachers.

Considerable interest has developed during the last few years concerning competencies needed by Extension educators. Czarniecki (1977) studied the level of professional competence needed by beginning Extension workers. A comparison was made between the perceptions of employers and educators regarding the level of professional competence possessed and the level desired of beginning Extension workers. The employer group consisted of 205 Extension district or area directors or agents from 25 states and the Virgin Islands. These people are responsible for hiring and supervising Extension workers. The educators group consisted of cooperative Extension administrators

and staff development coordinators from 47 states. The employers and educators were in general agreement on the desired levels of competence for the list of competencies, but differed considerably on the level of competence possessed by new Extension workers. The employers rated the preservice education as less than adequate. Educators seemed to indicate that graduates have more competence in general than the employers of new Extension workers recognize.

In the area of home economics, research was done by Carano (1970) to determine whether the teachers' self-assessment of teaching competence held any implication for home economics teacher education curricula from which the participants had graduated. The researcher wanted to determine how the teachers assessed their teaching ability, and whether (a) years of teaching experience, (b) highest degree earned, (c) average number of students taught per class each day, (d) membership in selected professional organizations, (e) collegiate grade point average, and (f) total school enrollment where employed were associated with variation in the teachers' self-assessed competence. Fifty-six Oklahoma home economics teachers who had obtained a baccalaureate or master's degree from Oklahoma State University in the previous six years participated in the study. A questionnaire was developed containing 75 competence statements which were related to the five major identified concepts for the home economics preservice education curriculum. A Likert-type scale was used to measure the attitudes of the teachers toward their own teaching. The teachers were largely in agreement when the ratings of the 75 competence statements were compared. The respondents perceived themselves as having "adequate" competence more frequently

than "moderate" competence. The teachers indicated a lesser degree of competence in organizing and teaching subject matter within the conceptual structure of knowledge; therefore Carano suggested that emphasis be placed on the integration of knowledge in the subject matter areas as well as in the professional education courses.

Bell and Cummings (1976) reported that research conducted at Texas Tech University using student-directed and teacher-directed methods for a competency-based education course had positive results. Nine modules were developed and used in a student-directed class and as a basis for instruction in a teacher-directed class. Sixty-three senior students were alternately assigned to the classes for attainment of specified competencies. Criterion tests measured the extent to which competencies were attained for each group. No significant difference in gain scores appeared between students who achieved competencies through these two methods, except in the competency area of program planning involving state standards. They suggested that combinations of teaching methods be used in competency-based education.

Gaffney (1976) investigated the competency attainment of Oklahoma State University home economics education student teachers in implementing instructional plans. Three assessment measures were developed and raters were trained to assess both plans and performance of 11 student teachers in eight vocational home economics centers in Oklahoma. Student teachers, cooperating teachers, other teacher educators, and the researcher worked together to verify the appropriateness of the assessment measures which had been developed. Student teachers developed instructional plans for a one week

mini-unit, allowing one day for introducing the unit and pretesting; three days for implementing instructional plans; and one day for summarizing and posttesting. Student teachers as a whole evidenced competency attainment in both planning and performing in the classroom. The gain score of secondary students indicated that learning occurred. However, the analysis of data revealed no significant relationships between secondary student learning and student teachers' abilities in planning and performing in the classroom.

Clothing Laboratory Management

Dunn (1979) investigated clothing laboratory management problems of Oklahoma vocational consumer and homemaking teachers to identify problems related to and skills needed in managing a clothing laboratory on the secondary level. A random sample of 300, from the approximately 480, Oklahoma vocational consumer and homemaking teachers were selected to participate in this study. A questionnaire was developed to identify these problems. The questionnaires were mailed during the spring of 1979. Two hundred thirty-nine questionnaires were returned and 220 were used in the study. Nineteen were deleted because they were incomplete. Data were analyzed by the use of frequencies, percentages and mean scores. Information gained was used to identify problems of the vocational consumer and homemaking teachers in clothing laboratory management. Recommendations were made as to the areas that should be included in classes taken by students enrolled in the home economics teacher education program at Oklahoma State University.

According to Dunn (1979), all aspects of managing a clothing laboratory, with the exception of budgeting, were rated as problems to some degree by approximately 50 percent of the participants. The most prevalent responses to an open ended question regarding necessary skills in managing a clothing laboratory were patience, clothing construction skills, and sewing machine repair skills. The participants also indicated a need for help in planning storage and cutting space in the clothing laboratory.

Summary

Competency-based education begins with the identification and writing of student competencies. These competencies identify the knowledge, skills, behaviors, and judgments the student will demonstrate at the end of the instruction. Many researchers have studied the competencies needed for their particular area, however very little research was found in the area of clothing laboratory management.

Competent clothing laboratory managers make plans for organizing and working in the laboratory prior to the beginning of class. They determine their needs and establish goals to give direction. Plans are made by visualizing the different activities that will take place in the laboratory and allotting time, space, and equipment needed for each. The plans should always be flexible and the interest and needs of the students should be considered.

CHAPTER III

METHOD AND PROCEDURE

The study was designed to investigate the relative importance of selected competencies in the area of clothing laboratory management in order to make recommendations for a competency-based unit on clothing laboratory management to be used in clothing classes taken by students enrolled in the home economics teacher education program at Oklahoma State University. To accomplish the objectives, data were collected by means of a questionnaire (Appendix A, p. 38).

Participants in the Study

Participants in the study were secondary vocational consumer and homemaking teachers of clothing in Oklahoma during the spring of 1980. The names and addresses of 363 teachers were provided by the state supervisor for Oklahoma Vocational Home Economics Education. Forty-eight of these were identified as beginning teachers. Two hundred fifty-eight questionnaires were returned. Seven were deleted because they were incomplete, leaving a total of 251 (69.1%) valid responses. Thirty (62.5%) of the original 48 of these were from beginning teachers. Two hundred twenty-one (70.1%) of the original 315 were from experienced teachers.

Description of the Instrument

The researcher developed 45 competencies from the problem areas identified by Dunn (1979). Each competency was scrutinized by the researcher and by two clothing, textiles and merchandising faculty members for (1) completeness, (2) clarity of terms and statements, (3) duplication of ideas, and (4) appropriateness of items. The competencies were then categorized into the following management areas: facilities, equipment and supplies, maintenance and care of equipment, and students. A questionnaire (Appendix A, p. 38) was developed in order for participants to rate the relative importance of each competency on a five point Likert-type scale from most important (5) to least important (1). The last item on the questionnaire provided space for respondents to write in competencies, in addition to those listed, which beginning consumer and homemaking teachers need in the area of clothing laboratory management.

Collection of Data

The questionnaire, a letter of transmittal (Appendix B, p. 44) and a self-addressed stamped envelope were mailed to 363 Oklahoma secondary vocational consumer and homemaking teachers on April 25, 1980. A follow-up letter (Appendix B, p. 45) was sent to those who had not responded by May 9, 1980. The questionnaires were coded to facilitate recording of those that had been returned. Three hundred sixty-three questionnaires were distributed; 48 to beginning teachers and 315 to experienced teachers. Two hundred fifty-eight questionnaires were returned and 251 were used in the study. Seven were deleted because they were incomplete.

Method of Data Analysis

Data were analyzed to determine the relative importance of each of the 45 competencies by the use of frequencies, percentages, and mean scores. The t-test was used to compare the perceptions of beginning teachers with those of experienced teachers.

A ranking procedure was used to determine the relative importance of each competency. Means were calculated by multiplying the value of the rating (5-most important, 1-least important) by the number of responses to the rating, summing the products, and dividing by the total number of responses to the item.

Frequency tables and t-values were used to compare the perceptions of beginning teachers with those of experienced teachers. All competencies were ranked and listed in descending order according to mean score (Appendix C, p. 47).

CHAPTER IV

ANALYSIS OF DATA

The purpose of the study was to identify and verify the management competencies needed by a beginning clothing teacher in order to provide guidelines for development of a unit in clothing laboratory management. As indicated in Chapter III a questionnaire containing 45 competency statements (Appendix A, p. 38) was developed to determine the relative importance of each competency and to compare the perceptions of beginning teachers with those of experienced teachers. Participants rated each competency on the questionnaire on a Likert-type scale to indicate their perception of the relative importance of each competency. Degree of importance was assigned according to weighted responses ranging from 1 to 5: 1-least important, 2-little importance, 3-important, 4-more important, and 5-most important.

Data were obtained from 251 Oklahoma vocational consumer and homemaking teachers during the spring of 1980. Thirty of the participants were beginning teachers and 221 were experienced teachers. An analysis of the data and guidelines for developing a unit in clothing laboratory management are presented in this chapter.

Ranking of Competencies

Responses of the participants were tabulated and a mean rating was determined for each of the 45 competencies according to the method

of summated ratings. Out of a possible range of 1.00 to 5.00, the distribution by mean scores for each competency ranged from 3.13 to 4.78. This small range and the fact that all of the competencies were rated higher than 3.00 suggested that each competency was considered important for beginning consumer and homemaking teachers. Mean scores for beginning teachers and for experienced teachers were calculated for each competency as well as pooled mean scores for the entire group. The competency statements are listed in Appendix C in descending order according to pooled mean scores, from the highest to the lowest. For purposes of this discussion those competencies with means ranging from 3.01 to 4.00 will be considered important and those with means ranging from 4.01 to 5.00 will be considered very important. The ratings of beginning teachers and experienced teachers were very similar; therefore this discussion centers on pooled means.

Mean scores for the following 37 competencies ranged between 4.01 and 5.00 and therefore were identified as being very important:

- 1.2 Arrange laboratory work areas and storage space to facilitate student work performance
- 2.1 Identify the equipment needed in a clothing laboratory
- 2.3 Identify the small sewing machine equipment which should be kept on hand in a clothing laboratory
- 2.4 Determine and order (purchase) instructional supplies
- 2.5 Develop and maintain an instructional materials file
- 2.6 Maintain an inventory of laboratory items
- 3.1 Describe acceptable ways of caring for laboratory equipment
- 3.2 Develop positive attitudes toward care of equipment

- 3.3 Motivate students to practice proper care of equipment
- 3.4 Recognize and use the correct name for the parts of the sewing machine
- 3.5 Establish a system for repairing and servicing sewing machines
- 3.6 Skipped stitches
 - 3.6B Jammed bobbins
 - 3.6C Continual breaking of threads
 - 3.6D Malfunction of buttonhole mechanisms
 - 3.7B Adjust bobbin tensions
 - 3.7C Adjust top thread tensions
 - 3.7D Clean bobbin case
 - 3.7E Clean feed dogs
 - 3.7G Replace throat plate
 - 3.7I Clean and oil inside face plate
 - 3.7K Clean and oil underneath head
- 4.1 Motivate students to use sewing tools correctly
- 4.2 Motivate students to return equipment to its proper place
- 4.3 Demonstrate patience
- 4.4 Maintain a system for keeping attendance records in the clothing laboratory
- 4.5 Examine and evaluate ways of supervising and instructing students in the laboratory
- 4.6 Adapt plans when equipment breaks down
- 4.7 Identify techniques for keeping all students busy at once in the clothing laboratory
- 4.8 Maintain discipline in the clothing laboratory

- 4.9 Encourage students to refrain from unnecessary talking while working
- 4.10 Motivate students to utilize entire class period constructively
- 4.11 Motivate for finishing garments by the designated time
- 4.12 Motivate to bring needed supplies to class on time
- 4.13 Motivate students to use classroom aids
- 4.14 Direct students in a system for cleaning and maintaining the laboratory
- 4.15 Appraise and develop evaluation devices for laboratory projects

Mean scores of the following eight competencies ranged between 3.01 to 4.00 and therefore were identified as being important:

- 1.1 Identify types and amounts of equipment storage needed in a clothing laboratory
- 2.2 Develop long range plans for equipment needed in a clothing laboratory
- 3.7A Adjust belt tensions
- 3.7F Lubricate gears
- 3.7H Replace take-up spring
- 3.7J Clean inside top of head
- 3.7L Replace worn cords
- 3.7M Replace worn belt

A t-test was used to compare the perceptions of beginning and experienced teachers regarding the importance of each competency. The t-test revealed a significant difference at the .05 level for only two competencies: competency 4.6 adapt plans when equipment breaks

down; and competency 4.13 motivate students to use classroom aids (Appendix D, p. 51). By the rating given each of the 45 competencies beginning teachers and experienced teachers perceived the importance of the competencies to be very similar. Appendix E, page 53 presents the frequency distribution of responses of beginning teachers and experienced teachers for each of the 45 competencies.

Management Areas

The questionnaire was categorized into four management areas: facilities, equipment and supplies, maintenance and care of equipment, and students. This discussion will deal with each management area in the order of the importance placed upon it by the respondents as determined by mean ratings of the competencies within each area. A summary of the number of competencies ranked important and very important for each management area is shown in Table I.

TABLE I
NUMBER OF COMPETENCIES RATED IMPORTANT AND
VERY IMPORTANT IN EACH MANAGEMENT AREA

Management Area	Important 3.01-4.00		Very Important 4.01-5.00	
	N	%	N	%
Facilities (2 competencies)	1	50	1	50
Equipment and Supplies (6 competencies)	1	17	5	83
Maintenance and Care of Equipment (22 competencies)	6	27	16	73
Students (15 competencies)	0	0	15	100

Management of Students

Management of students appeared to be the most important management area. The respondents rated all the competencies in this area as being very important. Mean scores of all 15 competencies ranged from 4.17 to 4.78. Demonstrate patience (competency 4.3) was rated as the most important of all the 45 competencies. Twenty-four respondents placed extra markings beside patience, suggesting that it was extremely important for a teacher to demonstrate patience in the clothing laboratory.

The respondents ranked getting students to bring supplies to class on time (competency 4.12) second and motivating students to finish garments by the designated time (competency 4.11) third. These two competencies are interrelated because if students are late getting supplies to the laboratory they are likely to be late finishing their project. Ten teachers wrote that getting students to bring supplies to class on time was very difficult to do. Three respondents suggested that the economic status of students should be considered by giving students advance notice of when supplies will be needed and having supplies brought at the first of the month. They also suggested having a plan for helping students who may not have the money to purchase sewing equipment and fabric.

Adapt plans when equipment breaks down (competency 4.6) and motivate students to use classroom aids (competency 4.13) were the only two competencies which the t-test revealed as having a significant difference at the .05 level between the perceptions of beginning and experienced teachers (Appendix D, p. 51). Both were rated to be of

more importance by the experienced teachers than by the beginning teachers. One teacher cautioned that classroom aids should never take the place of personal attention.

Evaluation and grading fairly (competency 4.15) was rated very important by both beginning and experienced teachers. Fifteen teachers either put extra checks on this competency to denote importance or wrote in comments. One teacher wrote that she finds evaluation the most difficult area of her job. Another teacher wrote that she would like more information (perhaps a summer workshop) on the following: motivating students to finish garments by the designated time (competency 4.11); motivating students to bring needed supplies to class on time (competency 4.12); motivating students to use classroom aids (competency 4.13); and ways to appraise and develop evaluation devices for laboratory projects (competency 4.15).

Keeping all students busy at once (competency 4.7) was ranked tenth in importance of all the competencies. One teacher wrote that this is an important competency but that it is difficult to accomplish. Ten teachers placed extra checks on this competency to denote its importance and five others wrote in comments. One teacher suggested devising a system for helping students so that all students get helped and no one monopolizes the teacher. Another suggested having projects for students who can't sew at a particular time because of a limited number of sewing machines. Two teachers wrote that being able to have time to help all students and to keep all students working and interested during the clothing laboratory is most important.

Competency 4.8, maintaining discipline in the laboratory was

ranked number seven in importance. One teacher suggested that teaching students self-discipline would help very much in this competency and also with some of the other competencies.

Management of Equipment and Supplies

The respondents stressed the importance of managing equipment and supplies for a smoothly operating laboratory by ranking five of the six competencies in this category as being very important. Identify the equipment needed in a clothing laboratory (competency 2.1) was the highest ranked competency in this area. Identify the small sewing machine equipment which should be kept on hand in a clothing laboratory (competency 2.3), determine and purchase instructional supplies (competency 2.4), maintain an inventory of laboratory items (competency 2.6), and develop and maintain an instructional materials file (competency 2.5) were ranked as being very important. Develop long range plans for equipment needed in a clothing laboratory (competency 2.2) was rated as being important.

Maintenance and Care of Equipment

Table I, page 22, indicates that 73% of the competencies in the management area of maintenance and care of equipment were rated very important. Teachers indicated that clothing laboratory managers need to be competent in dealing with jammed bobbins (competency 3.6B), skipped stitches (competency 3.6A), continually breaking threads (competency 3.6C), and malfunctioning of buttonhole mechanisms (competency 3.6D). Thirteen teachers indicated that developing positive attitudes toward care of equipment (competency 3.2) and motivating

students to practice proper care of equipment (competency 3.3) were very important but were difficult for them to accomplish. Describe acceptable ways of caring for laboratory equipment (competency 3.1) and recognize and use the correct name for the parts of the sewing machine (competency 3.4) were also rated as being very important.

The respondents agreed that establishing a system for repairing and servicing sewing machine (competency 3.5) was very important. Their write-in comments indicated disagreement about who should do the repairing and servicing of sewing machines. Four respondents suggested that a service person should do all the repairing and servicing of sewing machines. Fifteen respondents suggested that the teacher should be able to do sewing machine maintenance and minor sewing machine repair. Several mentioned that making repairs could save time and money which could be spent elsewhere. Two teachers wrote that their schools have service contracts for care of sewing machines twice a year. Several respondents noted that teachers need to know where and how to get a reliable sewing machine repairman. One teacher indicated that it is very difficult to get a repairman in isolated areas. Another teacher's words were "if the teacher can't do the repair work, she has to wait on a repairman which can take forever if they ever do show up." Sewing machine care and maintenance procedures rated as being very important by the participants were: adjust bobbin tensions (competency 3.7B); adjust top thread tensions (competency 3.7C); clean bobbin case (competency 3.7D); clean feed dogs (competency 3.7F); clean and oil inside face plate (competency 3.7I); and clean and oil underneath head (competency 3.7K).

Six competencies in the area of management and care of equipment

were ranked among the lowest eight of all the 45 competencies (Appendix C, p. 47). The lowest mean score, however, was 3.13; therefore all of these were rated as being important. These six competencies dealing with sewing machine care and maintenance were: lubricate gears (competency 3.7F); clean inside top of sewing machine (competency 3.7J); replace take-up spring (competency 3.7H); adjust belt tensions (competency 3.7A); replace worn cords (competency 3.7L); and replace worn belt (competency 3.7M). A few respondents suggested that these procedures should be done by a sewing machine repairman. One respondent wrote that a sewing machine repairman had advised against lubrication of all gears.

Management of Facilities

Several teachers commented that many schools are arranged in such a way that there is little or no real choice in the way laboratory work areas and storage space are arranged. Another wrote that teachers inherit facilities and must do the best they can with what is available. Arrange laboratory work areas and storage space to facilitate student work performance (competency 1.2) was rated as being very important. One teacher suggested that individual locked storage should be provided if possible, because in large classes, students tend to take the supplies of others.

Identifying types and amounts of equipment storage needed in a clothing laboratory (competency 1.1) was rated as being important with a ranking of 41. This suggested that prospective teachers should study ways to utilize storage more effectively. One teacher noted that no storage or department is perfect, but that most can be improved, and

that it is up to the teacher to know how to improve it.

Additional Concerns

In an open-end question teachers were asked to make suggestions for any additional competencies needed by beginning home economics teachers in the area of clothing laboratory management. Many participants listed areas of concern which did not belong in the area of laboratory management. Most of these dealt with clothing construction competencies. Many concerns were stated regarding the teacher's sewing expertise and experience in sewing, adjusting patterns, and making alterations for other people. The following comments of individual teachers (in their own words) pertaining to management were suggested:

1. Manage your own time
2. Set priorities
3. A teacher needs to be able to manage the superintendent so he will set up a budget for the department for supplies, equipment, etc.
4. Motivate parents to support child's project with encouragement, supplies and extra time to work on project
5. How to develop a project for a student who enters class in the middle of the project
6. Teacher needs to be creative and not panic when an accident occurs
7. Do not be disillusioned if everything and everybody isn't perfect
8. Motivate students' desire to sew at home for personal enjoyment, time well spent and for economic reasons.

Guidelines for a Unit on Laboratory Management

Findings from this study indicated that all of the 45 clothing laboratory competencies were important for beginning home economics teachers. Therefore, these competencies should be used as learning objectives for a competency-based unit on clothing laboratory management. Performance objectives should be developed for the competencies. Appropriate instructional material should be adopted, adapted, or developed for each competency.

Appendix F, page 58 presents a comparison of the ratings of each of the 45 competencies within the four management areas. All 15 competencies in the management of students area were ranked as being very important, so management of students should be given a high priority in developing a competency-based unit on clothing laboratory management. A considerable amount of time should also be given to the 16 competencies under maintenance and care of equipment which were rated as being very important. The six competencies in the area of maintenance and care of equipment which were ranked as important should be given less time in the clothing laboratory management unit.

Five of the six competencies in the area of management of equipment and supplies were rated by the respondents as being very important. One competency was rated important. Competencies in this area should be allowed a moderate amount of time in the unit with the smallest amount of time devoted to long range planning.

In the area of management of facilities the respondents ranked one competency very important and one important. These competencies should be given adequate time for coverage with emphasis on arranging

laboratory work areas and storage space to facilitate student work performance. Some consideration should be given to concerns listed by the respondents which were reported on page 28. Some of these concerns could be incorporated with existing competencies. Table II presents the suggested percentage of time which should be devoted to each management area, as recommended by the researcher. This percentage is based upon the number of competencies included in each area and the ratings of the competencies.

TABLE II
SUGGESTED CLOTHING LABORATORY MANAGEMENT UNIT
CLASSROOM INSTRUCTION TIME

Management Area	Approximate Percentage of Unit
Students	35
Maintenance and Care of Equipment	45
Equipment and Supplies	15
Facilities	5

This unit could be incorporated into a clothing class taken by students in the home economics teacher education program at Oklahoma State University. After careful consideration of the competencies the researcher recommends that a minimum of 12 contact hours be allowed for this unit. Each competency could be developed to a greater extent

if more time could be allotted. The amount of time allowed for one semester hour of credit would be ideal.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The study was designed to identify the competencies in the area of clothing laboratory management needed by beginning Oklahoma vocational consumer and homemaking teachers to determine the relative importance of each competency, to compare the perceptions of beginning and experienced teachers regarding the importance of each competency and to develop guidelines to be used in developing a competency-based unit on clothing laboratory management to be included in clothing courses taken by students in the home economics teacher education program at Oklahoma State University.

The participants in the study were 251 Oklahoma vocational consumer and homemaking teachers of clothing in the spring of 1980. Thirty of these were beginning teachers and 221 were experienced teachers.

Forty-five competencies needed by beginning clothing laboratory managers were identified and verified. Data were analyzed to determine the relative importance of each of the 45 competencies by use of frequencies, percentages, and mean scores. The t-test was used to analyze differences in perception of beginning and experienced teachers concerning the importance of each competency.

Conclusions

The research indicated that all of the 45 clothing laboratory management competencies were considered to be important for beginning consumer and homemaking teachers. The perceptions of beginning teachers and experienced teachers regarding the competencies necessary for a beginning consumer and homemaking teacher in the area of clothing laboratory management were found to be very similar. Only two of the 45 competencies were rated significantly different by the two groups. It was therefore recommended that all 45 competencies be incorporated into a competency-based unit on clothing laboratory management to be taught in clothing classes for home economics education majors at Oklahoma State University, and that major emphasis be placed on those competencies rated as very important.

Recommendations for Further Research

The following recommendations are suggested for further research:

1. Develop this competency-based unit on clothing laboratory management, teach the unit and evaluate it after the teachers have been on the job one year to determine its effectiveness.
2. Conduct a study to determine the clothing laboratory management competencies needed by occupational home economics teachers.
3. Investigate the clothing construction problems of consumer and homemaking teachers to determine the clothing construction competencies needed by a beginning teacher.
4. Develop a workshop for experienced teachers utilizing the competencies identified and verified in this study, teach the workshop and evaluate it by means of a pre-post test.

5. Replicate this study using clothing teachers of disabled students as the population to determine whether clothing laboratory management competencies needed for disabled students are different.

SELECTED BIBLIOGRAPHY

- Bell, G. C., and Cummings, M. N. Two methods of implementing a home economics competency-based education course. Home Economics Research Journal, 1976, 5 (2), 79-87.
- Burke, C. The Individualized Competency-Based System of Teacher Education at Weber State College. Washington, D.C.: American Association of Colleges for Teacher Education, 1972.
- Burrows, A. Management approach to teaching consumer and homemaking education. Proceedings of MATCHE I Workshop, San Francisco, April 7-8, 1975.
- Carano, M. K. A study of home economics teachers self-assessed teaching competence. Unpublished doctoral dissertation, Oklahoma State University, 1970.
- Czarniecki, P. An appraisal of the state of the art of extension education and of selected competencies for beginning cooperative extension workers in the United States. Unpublished doctoral dissertation, Oklahoma State University, 1977.
- Deacon, R. E., and Firebaugh, F. M. Home Management Context and Concepts. Boston: Houghton-Mifflin Co., 1975.
- Dolly, J. P., and Meredith, V. H. The use of mastery learning as a classroom management model. Educational Technology, 1977, 17, 26-29.
- Dunn, L. A. Clothing laboratory management problems of Oklahoma vocational consumer and homemaking teachers. Unpublished master's thesis, Oklahoma State University, 1979.
- Evans, G. E. Management Techniques for Librarians. New York: Academic Press, 1976.
- Gaffney, B. J. Assessing competency attainment in prospective home economics teachers in implementing instructional plans. Unpublished doctoral dissertation, Oklahoma State University, 1976.
- Gaffney, B. J. Improving time management in clothing classes at the secondary level. Unpublished master's thesis, Oklahoma State University, 1962.

- Gross, I. H., Crandall, E. W., and Knoll, M. M. Management for Modern Families. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973.
- Houston, W. R. Exploring Competency-Based Education. Berkeley: McCohan Publishing Co., 1974.
- Kohlmann, E. A. A model for competency-based teacher education. Journal of Home Economics, 1975, 8 (5), 19-22.
- Meszaros, P. S., and Baird, J. Developing Home Economics Learning Centers: A Competency-Based Approach. Homemaking Research Laboratories, Oklahoma State University, 1979.
- Morse, B., and Terrass, J. J. Evaluation: some progress in competency-based education. Journal of Home Economics, 1977, 3 (2), 33-36.
- Rindt, K. E. Handbook for Coordinators of Management and Other Adult Education Programs. Madison: University Extension of the University of Wisconsin Commerce Department of Management Institute, 1968.
- Schlater, J. D. The management process. Journal of Home Economics, 1967, 59 (2), 93-98.
- Silvius, G. H., and Curry, E. H. Managing Multiple Activities in Industrial Education. Bloomington, Ill.: McKnight and McKnight Publishing Co., 1971.
- Terry, G. R. Principles of Management. Homewood, Ill.: Richard D. Irwin, Inc., 1972.
- Witmer, B., and Mortensen, J. H. Professional education competencies needed by beginning teachers of agriculture/agribusiness education in Pennsylvania. Paper presented at the National Agricultural Education Research Meeting, Anaheim, Ca., November 11, 1979.

APPENDIX A
QUESTIONNAIRE

1 2 3 4 5

least
important

most
important

Degree of
Importance

	1	2	3	4	5
A beginning home economics teacher					
should be able to:					
2.2 Develop long range plans for equipment needed in a clothing laboratory					
2.3 Identify the small sewing machine equipment which should be kept on hand in a clothing laboratory					
2.4 Determine and order (purchase) instructional supplies					
2.5 Develop and maintain an instructional materials file					
2.6 Maintain an inventory of laboratory items					
III. <u>Maintain and Care for Equipment</u>					
3.1 Describe acceptable ways of caring for laboratory equipment					
3.2 Develop positive attitudes toward care of equipment					
3.3 Motivate students to practice proper care of equipment					
3.4 Recognize and use the correct name for the parts of the sewing machine					

1 2 3 4 5

least
important

most
important

Degree of
Importance

	1	2	3	4	5
A beginning home economics teacher should be able to:					
3.5 Establish a system for repairing and servicing sewing machines					
3.6 <u>Identify the cause of the following:</u>					
3.6A skipped stitches					
3.6B jammed bobbins					
3.6C continual breaking of threads					
3.6D malfunction of buttonhole mechanisms					
3.7 <u>Demonstrate the following sewing machine care and maintenance procedures:</u>					
3.7A adjust belt tensions					
3.7B adjust bobbin tensions					
3.7C adjust top thread tensions					
3.7D clean bobbin case					
3.7E clean feed dogs					
3.7F lubricate gears					
3.7G replace throat plate					
3.7H replace take-up spring					

1 2 3 4 5

least
important

most
important

Degree of
Importance

	1	2	3	4	5
A beginning home economics teacher should be able to:					
3.7I clean and oil inside face plate					
3.7J clean inside top of head					
3.7K clean and oil underneath head					
3.7L replace worn cords					
3.7M replace worn belt					
IV. <u>Manage Students</u>					
4.1 Motivate students to use sewing tools correctly					
4.2 Motivate students to return equipment to its proper place					
4.3 Demonstrate patience					
4.4 Maintain a system for keeping attendance records in the clothing laboratory					
4.5 Examine and evaluate ways of supervising and instructing students in the laboratory					
4.6 Adapt plans when equipment breaks down					
4.7 Identify techniques for keeping all students busy at once in the clothing laboratory					

	1	2	3	4	5
least important					most important
	Degree of Importance				
	1	2	3	4	5
A beginning home economics teacher should be able to:					
4.8 Maintain discipline in the clothing laboratory					
4.9 Encourage students to refrain from unnecessary talking while working					
4.10 Motivate students to utilize entire class period constructively					
4.11 Motivate for finishing garments by the designated time					
4.12 Motivate to bring needed supplies to class on time					
4.13 Motivate students to use classroom aids					
4.14 Direct students in a system for cleaning and maintaining the laboratory					
4.15 Appraise and develop evaluation devices for laboratory projects					

If you believe beginning home economics teachers need competencies which are not listed here, please write them below.

APPENDIX B

COVER LETTERS

O K L A H O M A S T A T E U N I V E R S I T Y
Department of Clothing, Textiles & Merchandising

April 25, 1980

Dear Consumer and Homemaking Teacher:

The Clothing, Textiles and Merchandising Department at Oklahoma State University is currently in the process of revising clothing classes taken by home economics education majors. A need has been shown for instruction in clothing laboratory management. We are vitally interested in keeping our curriculum relevant and up to date and we need your assistance.

The accompanying questionnaire contains teacher competency statements developed from Laura Dunn's research, 1979, defining clothing laboratory management problems of Oklahoma vocational consumer and homemaking teachers. Please indicate the importance of each competency for the beginning clothing construction teacher. Your replies will be kept confidential. The information obtained will be used in developing clothing laboratory management instruction for home economics education majors.

Please complete and return the questionnaire as soon as possible in the enclosed, prepaid envelope. It will take only about ten minutes of your time, and your responses are invaluable to the study. We appreciate your time and cooperation.

Sincerely,

Ruth E. Maxson
Graduate Teaching Assistant

Lynn Sisler, Professor
and Head of Department

REM:mlw

Enclosures-2

O K L A H O M A S T A T E U N I V E R S I T Y
Department of Clothing, Textiles & Merchandising

May 9, 1980

Dear Consumer and Homemaking Teacher:

Approximately two weeks ago you were sent a questionnaire containing teacher competency statements for clothing laboratory management. If you have not returned the questionnaire you received, would you please take a few minutes to complete and return it.

The response has been excellent and will be invaluable in developing an instructional unit in clothing laboratory management for home economics education majors. However, we are striving to receive information from as many teachers as possible and we hope you will assist us by completing the questionnaire and returning it promptly. Thank you for your cooperation.

Sincerely,

Ruth Maxson
Graduate Teaching Assistant

Lynn Sisler, Professor
and Head of Department

RM/w

APPENDIX C

COMPETENCIES IN MANAGING A CLOTHING LABORATORY
RANKED IN DESCENDING ORDER BY POOLED MEAN
SCORE OF 251 RESPONDENTS

TABLE III
 COMPETENCIES IN MANAGING A CLOTHING LABORATORY
 RANKED IN DESCENDING ORDER BY POOLED MEAN
 SCORE OF 251 RESPONDENTS

Number	Competency	Pooled Rank			
		\bar{X}	Rank	Beginning Teachers	Experienced Teachers
4.3	Demonstrate patience	4.78	1	1	1
4.12	Motivate to bring needed supplies to class on time	4.76	2	11	2
4.11	Motivate for finishing garments by the designated time	4.72	3	5	3
4.10	Motivate students to utilize entire class period constructively	4.70	4	2	6
3.6B	Identify the cause of jammed bobbins	4.70	4	9	4
4.8	Maintain discipline in the clothing laboratory	4.69	7	5	6
4.2	Motivate students to return equipment to its proper place	4.69	7	3	6
3.6A	Identify the cause of skipped stitches	4.69	7	8	6
3.6C	Identify the cause of breaking threads	4.68	9	11	9
4.7	Identify techniques for keeping all students busy at once in the clothing laboratory	4.66	10	15	10
3.3	Motivate students to practice proper care of equipment	4.66	10	5	11
4.1	Motivate students to use sewing tools correctly	4.65	12	5	12
4.5	Examine and evaluate ways of supervising and instructing students in the laboratory	4.62	13	18	12
4.15	Appraise and develop evaluation devices for laboratory projects	4.58	14	11	14

TABLE III (Continued)

Number	Competency	Pooled Rank			
		\bar{X}	Rank	Beginning Teachers	Experienced Teachers
3.4	Recognize and use the correct name for the parts of the sewing machine	4.52	16	13	19
3.2	Develop positive attitudes toward care of equipment	4.52	16	14	16
3.7D	Clean bobbin case	4.52	16	15	19
3.7E	Clean feed dogs	4.52	16	18	16
4.14	Direct students in a system for cleaning the laboratory	4.50	19	23	16
3.7G	Replace throat plate	4.49	22	18	23
4.13	Motivate students to use classroom aids	4.49	22	28	16
3.7C	Adjust top thread tensions	4.49	22	20	21
4.6	Adapt plans when equipment breaks down	4.47	23	26	21
2.1	Identify the equipment needed in a clothing laboratory	4.39	24	25	25
3.6D	Identify the cause of malfunction of buttonhole mechanisms	4.38	25	26	24
4.4	Maintain a system for keeping attendance records in the clothing laboratory	4.37	26	28	25
3.5	Establish a system for repairing and servicing machines	4.32	27	21	27
2.3	Identify the small equipment which should be kept on hand in a clothing laboratory	4.31	28	25	27
3.1	Describe acceptable ways of caring for laboratory equipment	4.30	29	24	29

TABLE III (Continued)

Number	Competency	Pooled Rank			
		\bar{X}	Rank	Beginning Teachers	Experienced Teachers
1.2	Arrange laboratory work areas and storage space to facilitate student work performance	4.26	30	31	30
2.4	Determine and purchase instructional supplies	4.25	31	32	31
4.9	Encourage students to refrain from unnecessary talking while working	4.17	32	34	32
3.7B	Adjust bobbin tensions	4.16	33	30	34
2.6	Maintain an inventory of laboratory items	4.16	33	35	32
2.5	Develop and maintain an instructional materials file	4.13	35	36	35
3.7I	Clean and oil face plate	4.09	36	33	36
3.7K	Clean and oil inside face plate	4.09	36	39	38
3.7F	Lubricate gears	3.94	38	37	37
3.7J	Clean top head of sewing machine	3.82	39	37	40
2.2	Develop long range plans for equipment needed in a clothing laboratory	3.82	39	41	38
1.1	Identify types and amounts of equipment storage needed in a clothing laboratory	3.68	41	39	41
3.7H	Replace take-up spring	3.45	42	42	42
3.7A	Adjust belt tensions	3.23	43	45	43
3.7L	Replace worn cords	3.16	44	44	44
3.7M	Replace worn belt	3.13	45	43	45

APPENDIX D

T-TEST COMPARISONS BETWEEN MEANS OF BEGINNING
TEACHERS AND EXPERIENCED TEACHERS
ON 45 COMPETENCIES

TABLE IV
 T-TEST COMPARISONS BETWEEN MEAN SCORES OF
 BEGINNING TEACHERS AND EXPERIENCED
 TEACHERS ON 45 COMPETENCIES

Competencies	Means		t-Value	Probability of Occurrence .05 Level
	Experienced N=221	Beginning N=30		
1.1	3.68	3.70	-0.07	.09369
1.2	4.28	2.10	1.15	.2558
2.1	4.40	4.33	0.48	.6295
2.2	3.85	3.60	1.32	.1943
2.3	4.32	4.23	0.72	.4720
2.4	4.27	4.06	1.37	.1777
2.5	4.15	3.93	1.23	.2249
2.6	4.19	3.96	1.46	.1508
3.1	4.30	4.26	0.29	.7694
3.2	4.53	4.50	0.26	.7890
3.3	4.66	4.63	0.36	.7179
3.4	4.52	4.53	-0.02	.9783
3.5	4.32	4.33	-0.05	.9600
3.6A	4.70	4.60	1.03	.3076
3.6B	4.72	4.60	1.09	.2779
3.6C	4.69	4.56	1.14	.2601
3.6D	4.41	4.20	1.17	.2460
3.7A	3.24	3.10	0.71	.4788
3.7B	4.16	4.13	0.19	.8493
3.7C	4.51	4.40	0.87	.3857
3.7D	4.52	4.46	0.48	.6292
3.7E	4.53	4.43	0.73	.4675
3.7F	3.96	3.80	0.90	.3723
3.7G	4.50	4.43	0.56	.5762
3.7H	3.44	3.50	-0.23	.8118
3.7I	4.09	4.03	0.31	.7539
3.7J	3.83	3.80	0.15	.8758
3.7K	3.85	3.70	0.80	.4249
3.7L	3.16	3.16	0.00	.9977
3.7M	3.11	3.26	-0.63	.5307
4.1	4.65	4.63	0.18	.8512
4.2	4.70	4.66	0.28	.7744
4.3	4.79	4.73	0.50	.6144
4.4	4.40	4.16	1.20	.2380
4.5	4.65	4.43	1.45	.1533
4.6	4.51	4.20	2.43	.0198*
4.7	4.69	4.46	1.50	.1410
4.8	4.70	4.63	0.67	.5005
4.9	4.19	4.00	1.13	.2623
4.10	4.70	4.70	0.06	.9518
4.11	4.74	4.63	0.98	.3300
4.12	4.78	4.56	1.96	.0563
4.13	4.53	4.16	2.85	.0068*
4.14	4.53	4.30	1.63	.1104
4.15	4.59	4.56	0.22	.8207

*Significant difference at the .05 level.

APPENDIX E
FREQUENCY DISTRIBUTION OF RESPONSES
OF 251 PARTICIPANTS ON CLOTHING
LABORATORY MANAGEMENT

TABLE V
 FREQUENCY DISTRIBUTION OF RESPONSES
 OF 251 PARTICIPANTS ON CLOTHING
 LABORATORY MANAGEMENT

Competency	Scale Number	Experienced N=221		Beginning N=30		Total N=251	
		N	%	N	%	N	%
1.1 Identify types and amounts of equipment storage needed in a clothing laboratory	1	8	3.62	0	0	8	3.18
	2	14	6.33	0	0	14	5.57
	3	73	33.03	14	46.66	87	34.66
	4	70	31.67	11	35.66	81	32.27
	5	56	25.33	5	16.67	61	24.30
1.2 Arrange laboratory work areas and storage space to facilitate student work performance	1	2	0.90	0	0	2	0.79
	2	7	3.16	0	0	7	2.78
	3	22	9.95	9	30.00	31	12.35
	4	84	38.00	9	30.00	93	37.05
	5	106	47.96	12	40.00	118	47.01
2.1 Identify the equipment needed in a clothing laboratory	1	3	1.35	0	0	3	1.19
	2	6	2.71	0	0	6	2.39
	3	23	10.40	4	13.33	27	10.75
	4	56	25.33	12	40.00	68	27.09
	5	133	60.18	14	46.66	147	58.56
2.2 Develop long range plans for equipment needed in a clothing laboratory	1	0	0	0	0	0	0
	2	13	5.88	4	13.33	17	6.77
	3	68	30.76	11	36.66	79	31.47
	4	78	35.29	8	26.66	86	34.26
	5	62	28.05	7	23.33	69	27.49
2.3 Identify the small sewing equipment which should be kept on hand in a clothing laboratory	1	1	0.45	0	0	1	0.39
	2	5	2.26	0	0	5	1.99
	3	32	14.48	3	10.00	35	13.94
	4	66	29.86	17	56.66	83	33.06
	5	117	52.94	10	33.33	127	50.59
2.4 Determine and order (purchase) instructional supplies	1	0	0	0	0	0	0
	2	6	2.71	0	0	6	2.39
	3	25	11.31	8	26.66	33	13.14
	4	92	41.62	12	40.00	104	41.43
	5	98	44.34	10	33.33	108	43.02
2.5 Develop and maintain an instructional materials file	1	0	0	0	0	0	0
	2	9	4.07	2	6.66	11	4.38
	3	43	19.45	8	26.66	51	20.31
	4	73	33.03	10	33.33	83	33.06
	5	96	43.43	10	33.33	106	42.23
2.6 Maintain an inventory of laboratory items	1	1	0.45	0	0	1	0.39
	2	10	4.52	0	0	10	3.98
	3	39	17.64	9	30.00	48	19.12
	4	67	30.31	13	43.33	80	31.87
	5	104	47.05	8	26.66	112	44.62
3.1 Describe acceptable ways of caring for laboratory equipment	1	1	0.45	0	0	1	0.39
	2	6	2.71	0	0	6	2.39
	3	35	15.83	4	13.33	39	15.53
	4	61	27.60	14	46.66	75	29.88
	5	118	53.39	12	40.00	130	51.79
3.2 Develop positive attitudes toward care of equipment	1	2	0.90	0	0	2	0.79
	2	1	0.45	0	0	1	0.39
	3	22	9.95	2	6.66	24	9.56
	4	48	21.71	11	36.66	59	23.50
	5	148	66.96	17	56.66	165	65.73
3.3 Motivate students to practice proper care of equipment	1	3	1.35	0	0	3	1.19
	2	0	0	0	0	0	0
	3	6	2.71	0	0	6	2.39
	4	49	22.17	11	36.33	60	23.90
	5	163	73.75	19	63.33	182	72.51
3.4 Recognize and use the correct name for the parts of the sewing machine	1	3	1.35	0	0	3	1.19
	2	3	1.35	0	0	3	1.19
	3	14	6.33	4	13.33	18	7.17
	4	55	24.88	6	20.00	61	24.30
	5	146	66.06	20	66.66	166	66.13

TABLE V (Continued)

Competency	Scale Number	Experienced N=221		Beginning N=30		Total N=251	
		N	%	N	%	N	%
3.5 Establish a system for repairing and servicing sewing machines	1	1	0.45	0	0	1	0.39
	2	6	2.71	0	0	6	2.39
	3	28	12.67	5	16.66	33	13.14
	4	71	32.12	10	33.33	81	32.27
	5	115	52.03	15	50.00	130	51.79
3.6A Skipped stitches	1	4	1.81	0	0	4	1.59
	2	2	0.90	0	0	2	0.79
	3	2	0.90	0	0	2	0.79
	4	39	17.64	12	40.00	51	20.31
	5	174	78.73	18	60.00	192	76.49
3.6B Jammed bobbins	1	3	1.35	0	0	3	1.19
	2	3	1.35	0	0	3	1.19
	3	3	1.35	1	3.33	4	1.59
	4	34	15.38	10	33.33	44	17.53
	5	178	80.54	19	63.33	197	78.48
3.6C Continual breaking of threads	1	3	1.35	0	0	3	1.19
	2	3	1.35	0	0	3	1.19
	3	4	1.81	1	3.33	5	1.99
	4	38	17.19	11	36.66	49	19.52
	5	173	78.28	18	60.00	191	76.09
3.6D Malfunction of buttonhole mechanisms	1	4	1.81	0	0	4	1.59
	2	8	3.62	2	6.66	10	3.98
	3	17	7.69	4	13.33	21	8.35
	4	56	25.33	10	33.33	66	26.29
	5	136	61.53	14	46.66	150	59.76
3.7A Adjust belt tensions	1	32	14.48	3	10.00	35	13.94
	2	30	13.57	3	10.00	33	13.14
	3	61	27.60	14	46.66	75	29.88
	4	47	21.26	8	26.66	55	21.91
	5	51	23.07	2	6.66	53	21.11
3.7B Adjust bobbin tensions	1	5	2.26	0	0	5	1.99
	2	12	5.43	1	3.33	13	5.17
	3	35	15.83	7	23.33	42	16.73
	4	58	26.24	9	30.00	67	26.69
	5	111	50.22	13	43.33	124	49.40
3.7C Adjust top thread tensions	1	3	1.35	0	0	3	1.19
	2	5	2.26	0	0	5	1.99
	3	19	8.59	2	6.66	21	8.36
	4	43	19.45	14	46.66	57	22.70
	5	151	68.32	14	46.66	165	65.73
3.7D Clean bobbin case	1	5	2.26	0	0	5	1.99
	2	4	1.81	0	0	4	1.59
	3	15	6.78	2	6.66	17	6.77
	4	42	19.00	12	40.00	54	21.51
	5	155	70.13	16	53.33	171	68.12
3.7E Clean feed dogs	1	4	1.81	0	0	4	1.59
	2	5	2.26	0	0	5	1.99
	3	18	8.14	3	10.00	21	8.36
	4	36	16.29	11	36.66	47	18.72
	5	158	71.49	16	53.33	174	69.32
3.7F Lubricate gears	1	12	5.43	0	0	12	4.78
	2	13	5.88	2	6.66	15	5.97
	3	47	21.26	10	33.33	57	22.70
	4	47	21.26	10	33.33	57	22.70
	5	102	46.15	8	26.66	110	43.82
3.7G Replace throat plate	1	5	2.26	0	0	5	1.99
	2	7	3.16	0	0	7	2.78
	3	18	8.14	2	6.66	20	7.96
	4	32	14.48	13	43.33	45	17.92
	5	159	71.94	15	50.00	174	69.32

TABLE V (Continued)

Competency	Scale Number	Experienced N=221		Beginning N=30		Total N=251	
		N	%	N	%	N	%
3.7H Replace take-up spring	1	26	11.76	2	6.66	28	11.15
	2	26	11.76	3	10.00	29	11.55
	3	56	25.33	11	36.66	67	26.69
	4	50	22.62	6	20.00	56	22.31
	5	63	28.50	8	26.66	71	28.28
3.7I Clean and oil inside face plate	1	12	5.43	1	3.33	13	5.17
	2	13	5.88	1	3.33	14	5.57
	3	27	12.21	7	23.33	34	13.54
	4	58	26.24	8	26.66	66	26.29
	5	111	50.22	13	43.33	124	49.40
3.7J Clean inside top of head	1	15	6.78	1	3.33	16	6.37
	2	26	11.76	1	3.33	27	10.75
	3	36	16.29	10	33.33	46	18.32
	4	48	21.71	9	30.00	57	22.70
	5	96	43.43	9	30.00	105	41.83
3.7K Clean and oil underneath head	1	12	5.43	1	3.33	13	5.17
	2	24	10.86	1	3.33	25	9.96
	3	38	17.19	11	36.66	49	19.52
	4	56	25.33	10	33.33	66	26.29
	5	91	41.17	7	23.33	98	39.04
3.7L Replace worn cords	1	39	17.64	4	13.33	43	17.13
	2	33	14.93	5	16.66	38	15.13
	3	47	21.26	9	30.00	56	22.31
	4	56	25.33	6	20.00	62	24.70
	5	46	20.81	6	20.00	52	20.71
3.7M Replace worn belt	1	41	18.55	3	10.00	44	17.53
	2	31	14.02	4	13.33	35	13.94
	3	53	23.98	11	36.66	64	25.49
	4	54	24.43	6	20.00	60	23.90
	5	42	19.00	6	20.00	48	19.12
4.1 Motivate students to use sewing tools correctly	1	3	1.35	0	0	3	1.19
	2	0	0	0	0	0	0
	3	4	1.81	2	6.66	6	2.39
	4	56	25.33	7	23.33	63	25.10
	5	158	71.49	21	70.00	179	71.31
4.2 Motivate students to return equipment to its proper place	1	4	1.81	0	0	4	1.59
	2	0	0	0	0	0	0
	3	6	2.71	2	6.66	8	3.18
	4	38	17.19	6	20.00	44	17.53
	5	173	78.28	22	73.33	195	77.68
4.3 Demonstrate patience	1	3	1.35	0	0	3	1.19
	2	1	0.45	0	0	1	0.39
	3	8	3.62	2	6.66	10	3.98
	4	15	6.78	4	13.33	19	7.57
	5	194	87.78	24	80.00	218	86.85
4.4 Maintain a system for keeping attendance records in the clothing laboratory	1	4	1.81	1	3.33	5	1.99
	2	3	1.35	2	6.66	5	1.99
	3	17	7.69	2	6.66	19	7.57
	4	72	32.57	11	36.66	83	33.06
	5	125	56.56	14	46.66	139	55.37
4.5 Examine and evaluate ways of supervising and instructing students in the laboratory	1	4	1.81	0	0	4	1.59
	2	1	0.45	1	3.33	2	0.79
	3	7	3.16	2	6.66	9	3.58
	4	44	19.91	10	33.33	54	21.51
	5	165	74.66	17	56.66	182	72.51
4.6 Adapt plans when equipment breaks down	1	1	0.45	0	0	1	0.39
	2	1	0.45	0	0	1	0.39
	3	15	6.78	4	13.33	19	7.57
	4	70	31.67	16	53.33	86	34.26
	5	134	60.63	10	33.33	144	57.37

TABLE V (Continued)

Competency	Scale Number	Experienced N=221		Beginning N=30		Total N=251	
		N	%	N	%	N	%
4.7 Identify techniques for keeping all students busy at once in the clothing laboratory	1	3	1.35	0	0	3	1.19
	2	4	1.81	1	3.33	5	1.99
	3	5	2.26	2	6.66	7	2.78
	4	34	15.38	9	30.00	43	17.13
	5	175	79.18	18	60.00	193	76.89
4.8 Maintain discipline in the clothing laboratory	1	1	0.45	0	0	1	0.39
	2	5	2.26	0	0	5	1.99
	3	5	2.26	0	0	5	1.99
	4	37	16.74	11	36.66	48	19.12
	5	173	78.28	19	63.33	192	76.49
4.9 Encourage students to refrain from unnecessary talking while working	1	4	1.81	0	0	4	1.59
	2	5	2.26	1	3.33	6	2.39
	3	40	18.10	8	26.66	48	19.12
	4	67	30.31	11	36.66	78	31.07
	5	105	47.51	10	33.33	115	45.81
4.10 Motivate students to utilize entire class period constructively	1	4	1.81	0	0	4	1.59
	2	0	0	0	0	0	0
	3	5	2.26	0	0	5	1.99
	4	39	17.64	9	30.00	48	19.12
	5	173	78.28	21	70.00	194	77.29
4.11 Motivate for finishing garments by the designated time	1	3	1.35	0	0	3	1.19
	2	1	0.45	0	0	1	0.39
	3	3	1.35	1	3.33	4	1.59
	4	36	16.29	9	30.00	45	17.92
	5	178	80.54	20	66.66	198	78.88
4.12 Motivate to bring needed supplies to class on time	1	4	1.81	0	0	4	1.59
	2	0	0	0	0	0	0
	3	2	0.90	1	3.33	3	1.19
	4	27	12.21	11	36.66	38	15.13
	5	188	85.06	18	60.00	206	82.07
4.13 Motivate students to use class-room aids	1	2	0.90	0	0	2	0.79
	2	2	0.90	0	0	2	0.79
	3	17	7.69	4	13.33	21	8.36
	4	55	24.88	17	56.66	72	28.68
	5	145	65.61	9	30.00	154	61.35
4.14 Direct students in a system for cleaning and maintaining the laboratory	1	3	1.35	0	0	3	1.19
	2	1	0.45	0	0	1	0.39
	3	13	5.88	5	16.66	18	7.17
	4	61	27.60	11	36.66	72	28.68
	5	143	64.70	14	46.66	157	62.55
4.15 Appraise and develop evaluation devices for laboratory projects	1	4	1.81	0	0	4	1.59
	2	0	0	0	0	0	0
	3	6	2.71	1	3.33	7	2.78
	4	62	28.05	11	36.66	73	29.08
	5	149	67.42	18	60.00	167	66.53

APPENDIX F

POOLED MEAN RATINGS OF COMPETENCIES IN MANAGING
A CLOTHING LABORATORY RANKED IN
DESCENDING ORDER BY AREAS

TABLE VI
 POOLED MEAN RATINGS OF COMPETENCIES IN MANAGING
 A CLOTHING LABORATORY RANKED IN
 DESCENDING ORDER BY AREAS

Facilities		Equipment and Supplies		Maintenance and Care of Equipment		Students	
Competency	Mean	Competency	Mean	Competency	Mean	Competency	Mean
<u>Number</u>	<u>Rating</u>	<u>Number</u>	<u>Rating</u>	<u>Number</u>	<u>Rating</u>	<u>Number</u>	<u>Rating</u>
						4.3	4.78
						4.12	4.76
						4.11	4.72
				3.6B	4.70	4.10	4.70
				3.6A	4.69	4.2	4.69
						4.8	4.69
				3.6C	4.68		
				3.3	4.66	4.7	4.66
						4.1	4.65
						4.5	4.62
						4.15	4.58
				3.2	4.52		
				3.4	4.52		
				3.7B	4.52		
				3.7E	4.52		
						4.14	4.50
				3.7C	4.49	4.13	4.49
				3.7G	4.49		
						4.6	4.47
		2.1	4.39				
				3.6D	4.38		
				3.5	4.32	4.4	4.37
		2.3	4.31	3.1	4.30		
1.2	4.26	2.4	4.25				
		2.6	4.16	3.7B	4.16	4.9	4.17
		2.5	4.13				
				3.7I	4.09		
				3.7K	4.09		
				3.7F	3.94		
		2.2	3.82	3.7J	3.82		
1.1	3.68			3.7H	3.45		
				3.7A	3.23		
				3.7L	3.16		
				3.7M	3.13		

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VITA

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Master of Science

Thesis: CLOTHING LABORATORY MANAGEMENT COMPETENCIES NEEDED BY
BEGINNING TEACHERS

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