ENTRY-LEVEL COMPETENCIES IN CLOTHING RELATED CAREERS NEEDED BY GRADUATES OF SECONDARY OCCUPATIONAL PROGRAMS AND AREA VOCATIONAL SCHOOLS IN MISSOURI

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CHAPTER I

INTRODUCTION

Vocational education has become increasingly important due to rapid economic and industrial changes in the United States in recent years. Instead of focusing mainly upon the employed middle-class American, it is now directing its attention to other levels of society and attempting to provide instruction which will lead to the employability of more individuals, while alleviating the problem of a lack of trained personnel available for employment in many occupations.

Area vocational schools and secondary home economics occupational programs have developed rapidly in most states since gaining added federal support through the Vocational Education Act of 1963 and the Amendments to the Act in 1968. Hackett (28, p. 328) stated that due to state and federal support, the employment aspect of home economics has become an important and vital area at the secondary level. The establishment of occupational programs throughout the country provides evidence that the role of the home economics teacher in public schools is changing rapidly and that more teachers will need to be prepared to take on responsibilities of these expanded vocational programs. By determining both the competencies which students must have for employment in various areas of home economics and the importance of those competencies which are being taught in occupational programs, a better foundation can be laid for curriculum planning to benefit secondary students and to aid

the undergraduate college students in home economics teacher education programs.

Statement of the Problem

In recent years, an increased emphasis on occupational education has led to a rapid growth of occupational training programs in high schools and area vocational schools and has created an immediate need for qualified teachers and adequate curricula for a variety of courses to meet student needs. There is an urgent need for research which will define the type of educational experiences needed by occupational teachers and the kind of curricula which will provide the students with entry-level competencies desired by their prospective employers.

The problem of this research has been to identify some of the entry-level competencies which are needed by graduates who are entering clothing related occupations from secondary occupational programs in high schools and area vocational schools. The results were utilized in stating implications for developing curricula for clothing related careers in secondary programs and for teacher preparation in undergraduate college teacher education programs.

Objectives of the Study

The objectives of the study were:

1. To determine the entry-level clothing careers which students were entering, or could enter, upon completion of secondary occupational programs in high schools or area vocational schools in Missouri.

2. To determine the entry-level competencies and the degree of importance of each competency in performing tasks required in the clothing related occupations.
3. To suggest improvements for high school occupational clothing program curricula and for preparation of teachers who will teach textiles and clothing related courses in occupational programs.

Assumptions of the Study

The assumptions of the study were:

1. Secondary occupational programs and area vocational schools in Missouri were adequately preparing some students for entry-level positions in some clothing careers.
2. Employers in clothing related occupations have determined a proficiency level of knowledge, skills, and judgment which they expect entry-level employees who graduated from occupational clothing programs to have mastered.
3. Interviews and questionnaires from the three groups to be studied would provide information which could be compared for points of agreement and disagreement and utilized in suggesting improvements for high school occupational clothing course curricula and for preparation of teachers who will teach textiles and clothing related courses in occupational programs.

Limitations of the Study

The study was limited to the 1972 and 1973 graduates of secondary

occupational programs in high schools or area vocational schools that offered occupational clothing courses in Missouri, their employers and their clothing service teachers. Occupational clothing courses were relatively new in the occupational programs in Missouri, so the 1972 and 1973 classes were used because more graduates could be contacted from those years. Persons graduating in 1974 would not have been on the job long enough to respond adequately to the questionnaires.

The representation of clothing occupations was limited to industrial sewing, dry cleaning and laundering, and alteration specialist because they were the occupations entered into by the participants of the study. The employers in the study were limited to those who had employed occupational clothing graduates in order that a comparison could be made of employer expectations and those of the graduates and their teachers.

Hypotheses

The hypotheses of the study, stated in the null form, were:

1. There is no significant difference among the responses of employers, graduates, and teachers of the secondary occupational clothing programs regarding the entry-level competencies considered essential or of some advantage to employment in the clothing related occupations of industrial sewing, dry cleaning and laundering, and alteration specialist.
2. There is no significant difference among the responses of employers, graduates, and teachers of the secondary occupational clothing programs regarding the degree of importance indicated for each of the entry-level competencies needed

for employment in the clothing related occupations of industrial sewing, dry cleaning and laundering, and alteration specialist.

Procedure

The following procedures were used to meet the objectives:

1. Administrators of high schools and area vocational schools that offered occupational clothing courses in Missouri were contacted for information regarding their 1972 and 1973 graduates.
2. An interview form was prepared to be used with the employers of the high school graduates to identify the competencies necessary for entry-level in the graduates' jobs, the importance of each competency, and the employer's opinion as to how well the high school graduates were prepared for entry-level employment.
3. A panel of judges, which included two employers from the clothing industry and three home economists in the occupational clothing field, was selected to review the interview form and make suggestions.
4. The employers were contacted by letter and telephone to request an appointment for an interview. The interview forms were implemented and the results were tabulated.
5. A questionnaire was developed using the results of the employer interviews and was mailed to employed graduates to determine their agreement with the competencies suggested by employers and to learn their opinions of how

well they were prepared for the competencies in their occupational classes.

6. A questionnaire was prepared, again using the competencies suggested by employers, and mailed to the occupational clothing teachers of the graduates to determine their agreement with the results obtained from graduates and employers, to learn the background and preparation of the teachers for their positions.
7. The background information on teachers was tabulated and used to describe the scholastic and occupational preparation of the teachers who are teaching in the occupational clothing programs. The information received from graduates, employers, and teachers was tabulated and analyzed to develop a graduate, employer, and teacher description. The information obtained from the groups regarding entry-level competencies was compared statistically on points of agreement at the .05 level of significance.
8. The results were compiled and a report was written to be shared with the Missouri State Department of Education, the administrators and teachers of occupational programs, home economics and other occupational program supervisors, teacher educators, and others.

Definition of Terms

Area Vocational School is a public school approved by the State Board for Vocational Education to provide instruction in occupations

for residents of an area usually larger than a local administrative unit (54, p. ix).

Clothing Related Careers are occupations utilizing knowledge and skills in clothing construction, alterations, maintenance, and consumer information concerning textiles and clothing.

Entry-Level Competencies encompass the knowledge, skills, and judgment which a beginning employee demonstrates at a predetermined proficiency level when first obtaining a position of employment.

Secondary Occupational Program is a community-based high school program in which students receive occupation-related classroom instruction and on-the-job training as in Cooperative Vocational Education (1, p. 29).

Summary

The significance of the study was stated in the introduction to Chapter I. It was followed by the statement of the problem, objectives of the study, assumptions of the study, limitations of the study, hypotheses, the procedure used to reach the objectives, and a definition of terms. A review of literature related to the research will follow in Chapter II. The procedure and method will be described in more detail in Chapter III and the interpretation of the data in Chapter IV with the summary, conclusions, and implications presented in Chapter V.

CHAPTER II

REVIEW OF LITERATURE

Vocational and occupational education in the broad sense of the terms are not recent ideas. They have been known almost from the earliest history of mankind. For hundreds of years, the existence of people has depended upon the majority of them being able to perform tasks which benefited others and by which they earned their own livelihood. As individuals became experts at various tasks through the years, these became known as trades, vocations, or occupations. Most young people expected to learn a trade by which they could earn a living and began at an early age to work in that occupation under the supervision of someone already adept at it. This was likely one of the earliest forms of vocational or occupational education.

Throughout the history of man, vocational education has been regarded in many different ways. At times, its prestige has been relatively high. At other times, it was thought to be only for those who could not achieve academically. Today, the pendulum of public thought is beginning to swing to a higher level in its regard for vocational education. Many people who influence educational programs are beginning to realize the importance of training every capable individual in a vocational career area or occupation at which he or she may succeed. With such success, the development of good work attitudes, and a well-rounded education for managing his personal life, an individual can be a

productive, well-adjusted and happy citizen for life. This is one of the goals of vocational education as it is known today.

Growth of Occupational Programs

Recent years have brought renewed emphasis on career education and occupational education in institutions of learning. However, Marland (44, p. 203) observed that as early as 1759, Benjamin Franklin called for a "Public Academy" that would combine academic and occupational training to give youngsters from low income families the chance to move up the economic ladder and become part of the middle class. Other educators have advocated the same approach through the years.

The Federal government of the United States has felt that vocational education is important enough to make specific provisions for it in various legislation such as the Smith-Hughes Act in 1917. According to Barlow (6, p. 2), the Smith-Hughes Act sought specifically to facilitate occupational choice by providing funds to the states for the promotion and development of programs of vocational education. In the interest of the general welfare of the nation, the states were urged to provide occupational instruction for youth in school and for youth and adults who were out of school.

After the enactment of the Smith-Hughes Act, all the states became involved with vocational programs, but, according to Barlow (6, p. 4), by the middle of the twentieth century enrollments in the program of vocational education had increased significantly, but the contribution of the public schools to the actual needs of the labor force was small. This realization indicated a need for evaluation of the existing

vocational programs which resulted in the Vocational Education Act of 1963. Barlow (6, p. 199) said

> With few exceptions the program of vocational education served the American people well. The only trouble was that it served too few people, was found in too few schools, and was organized in too few occupational areas. The legislation of 1963 recognized the achievements made under the previous acts and no attempt was made to change significantly the existing structure of the vocational education program. The emphasis in 1963 was upon providing vocational education where it had not been developed previously.

Even with the increased emphasis given vocational education by the 1963 legislation, problems still continued to arise. Barlow (6, p. 13) stated

> In theory, vocational education is available to a large majority of the labor force. However, the enrollment record indicates that vocational education has not provided all the job training it is theoretically capable of providing. Furthermore, such training has not always matched critical employment needs.

Observations such as these and constructive suggestions from many sources brought about the Vocational Education Amendments of 1968 in an attempt to alleviate some of the previous problems of vocational education.

> It is the purpose of Title I, Vocational Education, 1968 Amendments, to assist, to maintain, to extend, and to improve existing programs and to develop new programs so all people will have access to training or retraining which is of high quality and realistic in the light of actual or anticipated opportunities for gainful employment which is suited to their needs, interests, and abilities and can benefit from such training (2, p. 1).

Regarding the Vocational Amendments of 1968, Bottoms (10, p. 21), stated that the provisions of the amendments charge vocational education with providing programs that allow students to accomplish certain essential career development tasks in addition to acquiring job skills.

Johnson (40, p. 1) observed that since the passage of the Vocational

Act of 1963, programs in home economics education to prepare youth and adults for employment have become a reality. In a relatively short period of time, home economics programs with occupational emphasis at the high school level were developed.

Home economics programs had traditionally trained girls for the vocation of homemaking prior to 1963. Nelson and Jacoby (48, p. 142) wrote

> By 1963, two sociological forces in America had become so strong that legislation governing vocational education was amended and extended to allow for more flexibility and experimentation. One result was that home economics added a further dimension to its traditional emphasis: the training of girls and boys for entry-level jobs in areas in which students had basic home economics knowledge. The major social forces having such a profound effect on home economics education were changing conditions in the world of work, brought about by technological advances, which meant that industry no longer readily absorbed the dropout and terminal high school student unprepared for a job; and change in the status of women, whereby home economics education was challenged by an obligation to prepare women for the dual role they increasingly play in America, that of homemaker and wage-earner.

Enrollments in occupational home economics programs grew rapidly after the passage of the Vocational Education Act of 1963. In 1964, there were 1,500 enrollees compared to 113,297 enrollees in 1969 (36, p. 13).

Such rapid growth has brought about problems of adjustment, adaptation, and adequately meeting demands from all areas involved. Crum (18, p. 27) stated that vocational education supply is not meeting manpower demand in any of the traditional occupational areas, including agriculture and gainful home economics. He stated further that no one source can supply all manpower projections. All agencies and institutions must exchange their special insights in helping to determine

future employment needs. Local schools and local employment service agencies must work together closely to bring about more productive program planning.

Another problem that has been created by the rapid expansion of occupational programs and career education is that teacher educators have found it difficult to adapt to the need for training instructors for the occupational areas. In some cases, people trained in industry have been employed as teachers for such programs in area vocational schools and have taught classes with the aid of supervisors trained in curriculum development and teaching methods. Some of the people trained in industry are taking evening classes in education to qualify for teaching certificates in states which have such certification for occupational teachers. Others who are trained in education may be seeking employment in industry to obtain the work experience needed to teach in occupational programs.

Rapid growth of any kind always creates problems of adjustment. With research, continuous evaluation, and the cooperation of all those affected by occupational education, it can continue to improve and benefit all of society.

Program Research and Evaluation

With many occupational programs only a few years old, several states have already begun research and evaluation of the end product (the graduate) in order to determine the value of the program and make improvements where they are needed. Many states are obtaining follow-up information on the graduates to determine the demand for employees in

various occupations being taught, but little research has been done which can be applied to curriculum improvement and teacher training.

Research was done by Felstehausen and Howell in 1971 to obtain information on Illinois home economics job training programs. They concluded that the graduates generally found the program to have prepared them for employment. The participants indicated that the greatest training contributions were in areas of getting along with other workers, patients, and customers; using time and energy; and handling new or unpleasant situations (24, p. 2).

Some of the research needs stated in the study were for further information to indicate how well students grasped the relationship between entry-level employment and career development; understood the salary or wages for entry-level jobs; or if the training being provided was leading to dead-end jobs. The researchers also indicated that there is a need to identify a variety of alternate contributions being made by occupational, vocational, cooperative, and other work experience programs in order to completely document the full measure of the services being purchased through the use of federal and state funds. They stated that research should be encouraged to determine if cooperative home economics program graduates desire or are able to obtain training-related jobs (24, p. 11).

Research was done by Berry in 1965 to investigate the attitudes of high school homemaking students toward gainful employment in clothing services. She found that they were interested in the clothing courses for personal gain but were not as interested in working in that field. She stated, however, that the type of school in which clothing service classes seemed more feasible was the area vocational school. These

schools could possibly offer cooperative courses with other vocational classes which might stimulate interest for prospective trainees (8, p. 38).

A report of research done by Cozine and others at Oklahoma State University in 1968 supported the need for including the employer of students in planning and evaluation of occupational training programs. The research indicated that close and continuous contact should be maintained with cooperating employers in order to provide classroom learning experiences which contribute to the development of the competencies related to success in work experiences and later as an employee. As the competencies desired by employers change, the teachers should evaluate the concepts, generalizations, teaching methods, work experiences, resource materials, facilities, and evaluation techniques and add, delete, or modify each in accordance with the revised list of competencies (17, p. 3).

In a 1974 study of the needle trade industry, Bates (62, p. 4) reported that at the present time most of the employees are trained on the production line, but employers indicated they would prefer hiring persons already trained, assuming the graduate is well trained, willing, and ready to work full time. Employers reported they had difficulty finding enough applicants, trained or untrained, to fill openings.

Robinson's research in 1968 (56, p. 106) included responses from business and school personnel who believed that students should observe and receive work experience as part of their occupational training. However, Ridley's 1967 study (54, p. 166) indicated that most employers did not consider working experience a necessary prerequisite for employment. Most of the employers had some form of on-the-job training with

the vast majority using individual instructions and one or more of the following methods: training sessions, apprenticeships, specialized training, staff meetings, written materials and workshops.

After completing research on employment opportunities utilizing knowledge and skill in home economics, Gorman (26, p. 60) wrote that the employment benefits for the job titles involving knowledge and skill in home economics and having employment opportunities were less than expected by most citizens. She suggested that, when planning home economics occupational programs, cooperative education programs be developed so enrollees can earn while they learn; that the local advisory committee work with personnel from management to increase the benefits for employees; and that a careful follow-up of employees be organized to see if effective work is being duly rewarded.

The students in Nelson's study (49, p. 15) indicated that supervised work experience of any kind was useful whether under school auspices or for an outside employer. They nearly unanimously endorsed paid work experience for an outside employer as an indispensable feature of occupational education.

Nelson and Jacoby's follow-up study (48, p. 144) further endorsed the need for related work experiences during the students' occupational training. They reported that

> Students indicated during the courses and in the follow-up study at least minimal satisfaction with their entry-level jobs. Most students were so eager to work that they were pleased to accept any suitable first job as long as it paid the minimum wage and offered as many hours of work as they wished. As students met the realities of working, they became more discriminating about the selection of a second job. Outside related work experience during the occupational home economics course contributed to better hourly wage and higher-status jobs in the follow-up period. Having had more units of vocational education courses was also related to higher follow-up wage and job status.

In a follow-up study of twenty-six occupational clothing graduates and drop-outs in 1974, Johnson (39, p. 59) discovered that

> The overall training received during the years 1970-73 by the graduates and drop-outs in the sample group appeared to be satisfactory in the following areas: (1) knowing how to dress for an interview, (2) knowing how to use sewing equipment on the job, (3) working with a new assignment, (4) being able to talk with the boss about job problems in getting along with other workers, (5) working with a new piece of equipment, (6) receiving an unfavorable evaluation of work. Students did reflect a need for more training in areas relating to human relations such as handling unpleasant situations involving disagreeing with a superior.

The problems of getting along with others and learning to conduct themselves in a businesslike fashion were evident in an experimental project reported by Rhodes and Miller (53, p. 32). Their project concerned a wage earning clothing construction program for disadvantaged adolescents. The greatest asset of the program, they said, was the chance it offered participants to realize their value to society and that they had a skill for which others would pay. Other benefits were the increased skills which they developed in communication, record-keeping, and the businesslike manners needed for getting and keeping jobs anywhere.

The occupational teachers in Johnson's study (40, p. 18) expressed a concern for the type of program presently in use for occupational training of secondary students. They indicated that one year was not a sufficient length of time to adequately prepare high school students for job competency and suggested a second year of training as a desirable goal. Johnson also pointed out that further research is needed to determine the effectiveness of various kinds of programs that are established to train persons at the pre- and in-service levels to teach courses with occupational emphasis (40, p. 56). Obviously,

research is needed at all levels of occupational education and with all groups of people involved to get an overall picture of the needs from every angle.

Harvey and Nelson (30, p. 19) researched the goal-setting behavior of occupational students in home economics by developing a method for teaching the students to set realistic goals, thereby increasing performance levels. They concluded that interaction between achievement motivation and treatment effects on attitude change was significant on completion of the unit. Much more research needs to be done in the area of attitudes toward work. Educators and employers have emphasized skills to reach immediate goals, but have not helped the occupational student enough in developing better attitudes and values so that he or she may be happier and more successful in the world of work.

Several recent studies have had evaluation of occupational programs as at least a portion of their purpose. Evaluation results have been invaluable in giving an indication of the effectiveness of curricula, teaching methods, guidance, job placement, job performance, and satisfaction of participants in the occupational programs.

In an evaluation of secondary school programs preparing students for wage earning in occupations related to home economics, Nelson and Jacoby (48, p. 143) reported that

> Most students by the conclusion of the programs, showed acceptable attitudes toward work and minimum employability characteristics and skills. Young people were shown to want to work and, indeed, to attach considerable status to being able to hold a job. Students expressed the general opinion, in individual interviews, that any occupational practice, orientation, or work experience was helpful in preparing for jobs; but most prized was class experience closely meshed with paid work experience for an outside employer. Three-quarters of the students interviewed considered their generally strong background of basic home

economics courses to be essential for success in occupational education classes.

Brantner (12, p. 26) advocated follow-up studies which could be used to help graduates adjust to the world of work and also to justify program expenditures to the public. His justification for such research is:

> A critical public is requiring educators and educational institutions to justify their expenditures (and their very existence) more assiduously than ever before. One measure of accountability applied to vocational education is how well its graduates fare in the world of work. The public, however, is holding schools accountable for expending taxpayer's funds in a manner that will ensure the maximum benefits to society. Thus, the students' total adjustment to society is part of the school's accountability. Follow-up studies conducted for the purposes of helping their graduates to adjust to work and to adult life can therefore provide schools with a useful accountability tool (12, p. 27).

Brun (14, p. 197) stated that evaluation of occupational programs is a necessary and logical part of the vocational education process. If conducted well, the results of evaluation can serve a variety of functions. For example:

1. Evaluation of occupational programs is needed to determine the effectiveness of the teaching-learning process.

2. Evaluation of occupational programs is needed to make decisions about the curriculum.

3. Evaluation of occupational programs is needed to provide data for reporting to students, parents, colleagues, administrators, and state agencies.

A 1974 study reported by Wilms (38, p. 25) evaluated the effectiveness of post-secondary public and proprietary occupational training for six occupations: accountant, computer programmer, electronics technician, dental assistant, secretary, and cosmetologist. The study's major findings were:

That graduates of proprietary, or profitmaking schools had

> no greater success in the job market than graduates of public schools; that in professional and technical-level occupations, neither public school nor proprietary school graduates had a very high degree of success in obtaining jobs for which they had trained; that neither type of school made substantial headway in helping disadvantaged students overcome barriers of class and income; and that proprietary school graduates generally were less satisfied with their training than public school graduates were with theirs.

Of course, evaluation studies are of no value unless implemented as quickly as possible. Gilli (25, p. 25) suggested that research findings be implemented into the system so that vocational students are better educated and trained than their predecessors. He stated that in many cases, inadequate attention and insufficient resources are committed to the translation-feedback phase, when in fact it requires special expertise as well as adequate time. Action is required beyond exhorting faculty and administrators to make suggested changes.

In regard to occupational home economics programs specifically, Johnson (40, p. 23) stated that a follow-up study of the participants in home economics courses with occupational emphasis is advisable as a means of obtaining evidence of the worth of the program. It would be of value to those concerned with such programs to learn the extent to which individual needs have been met. She also suggested that criteria should be established for uniform evaluation of the programs. Adequate evaluation measures could strengthen the existing home economics programs with occupational emphasis and could provide a basis for development of new programs with occupational emphasis.

Research and evaluation of occupational programs is of utmost importance if their existence is to be justified, and if they are to continue growth and development. It is imperative that the findings of research and evaluation studies be implemented soon if they are to

be of value to the occupational programs and future participants.

Need for Occupational Training

A number of authors have written books and articles in recent years supporting the need for occupational training, constant evaluation of it, and up-dating of its programs. Morgan (46, p. 15) wrote that programs should be planned which meet the needs of the students, the needs of the community, and the manpower needs of the area. As vocational educators, society expects us among other things to prepare youth while they are still in school for entry-level employment so that they can be self-sufficient and have a basis on which to succeed.

Van Horn (67, p. 24) said the preparation for wage earning places emphasis on development of personal qualities and attitudes important in securing and holding a job, and on the development of proficiency of a skill to the point that it has a wage value.

The importance of training for occupational clusters was emphasized by Dobry (19, p. 57) who stated that another factor to consider is whether we have focused our offerings through courses preparing for single occupations or through programs geared toward an occupational cluster. The traditional approach to preparing students for single occupations tends to restrict their freedom in making occupational choices, overlook rapid changes in the labor market, and limit mobility.

According to Brown (13, p. 33), labor projections show that service and technical occupations are on the rise. Leaders in home economics education have made considerable progress in identifying service occupations related to home economics which can be appropriately taught at secondary and post-high school levels.

Some of the service occupations are being taught through Cooperative Education Programs which are described as follows:

> Cooperative Education Programs offer many advantages in preparing young people for employment that they might not get otherwise. Through such programs, on-the-job training is combined with classroom instruction enabling students to acquire knowledge, skills, and appropriate attitudes. Such programs remove artificial barriers which separate work and education by involving educators with employers and create interaction whereby the needs and problems of both are known to each other. Such interaction makes it possible for occupational curricula to be revised to reflect current needs in the various occupations (2, p.1).

The HERO programs for Home Economics Related Occupations have also been developed to promote the interest in occupations requiring a home economics base.

> Gainful employment programs in vocational homemaking education are those which prepare students for employment in occupations requiring knowledge and skills in one or more of the home economics subject areas including Care and Guidance of Children, Commercial Foods Management, Fashion Design Production, Home and Community Management, and Housing and Interior Design (2, p. 3).

Vocational and occupational education, probably more than any other type of educational process, is geared toward meeting the needs of people. Lamar (43, p. 32) stated that the guiding purpose of vocational education is to help every educable person to develop the competencies he needs to enter and advance in a vocation.

Bottoms and O'Kelley (10, p. 21) noted that all youth, as a part of growing up, are entitled to experience the psychological meaning of work, to examine the benefits to society of different forms of work, and to test themselves in different work roles. In addition, they said, every young person should be encouraged to examine exploratory experiences in terms of what they mean to him personally and to plan and pursue educational programs that will help him reach his goal.

Although vocational and occupational programs are open to anyone who displays an interest in that specific type of training, Harvey and Nelson (30, p. 19) observed that occupational courses have been instituted to meet the needs of those students who appear to be unsuccessful in academic subjects. Such courses have two common characteristics: they offer both job training and active involvement in learning activities. The teachers usually have had trade experience and bring an element of reality to learning that many students respond to positively.

Johnson (40, p. 17) emphasized the value of an occupational program in home economics for the potential high school drop-out in the following statements:

> It is undesirable to limit enrollment in home economics courses with occupational emphasis to high school seniors because many students become drop-outs before they become seniors. Potential drop-outs need an opportunity to take advantage of such courses which prepare students for gainful employment. In some school situations, it appears that these courses provide an opportunity to earn money and go to school--a necessity if some students are to stay in school.

Another statement by Johnson (40, p. 1) was that a question arises as to whether education can meet the occupational need of the people. The purpose of vocational education, to prepare individuals to engage successfully in a socially useful occupation, implies that the individual will be provided adequate education for the development of skills, attitudes, and knowledge to the extent that he may enter or make progress in his chosen vocation. If vocational and occupational education can meet these criteria expressed by Johnson and others, then it will truly be meeting the needs of all people - those who train in the programs and those who benefit from the services provided by well trained workers in a wide variety of occupations.

Reactions of Educators to Occupational Education

Some educators have been reluctant to accept the change to an occupational orientation for students. However, Stark (61, p. 147) stated that many teachers are beginning to conclude that teaching for employment in areas related to home economics will add a new dimension to the high school home economics programs.

The reluctance of some home economics teachers to accept occupational programs may have been due to the need for additional training to gain competence as a teacher in such a program. Cozine (17, p. 3) expressed this need by saying that additional research is needed before specific recommendations for competencies and personal characteristics needed by a gainful employment teacher can be made; however, members of the research team would recommend that in addition to training and experience as a homemaking teacher, it would be helpful to have special training in one subject area slanted toward occupational training. It would also be desirable to have some other occupational experience, and some training in guidance.

After researching the attitudes, knowledge, and plans of undergraduates, homemaking teachers and occupational teachers in Illinois in 1969, Bobbitt (9, p. 65) recommended that employment education courses for undergraduates in college provide opportunities for the students to: become more familiar with journals and periodicals in employment education; attend and participate in activities of their State Vocational Home Economics Association Teachers Conferences and Vocational Teachers Association Conferences; visit and participate in activities in high school occupational programs and particularly home

economics occupations programs; obtain experience in student teaching which provides an association with and participation in occupational programs; and obtain directed work experience which is directly related to home economics.

Bobbitt (9, p. 67) stated that the home economics education students in her study who completed an experimental course in employment education differed significantly from the occupational and homemaking teachers in regard to their attitudes toward the employment emphasis in home economics. This seems to indicate the importance of keeping up-to-date with additional research to constantly improve teacher training methods in occupational home economics.

Pautler (51, p. 238) stressed the point that all educators should become involved in promoting occupational education at all levels. He wrote that

> Some form of occupational education is necessary for all children. One aspect of occupational education should be to develop an awareness in children of the contemporary and future world of work. Such a task falls to all the professionals in teaching and not just the small groups of educators in home economics, business and office occupations, industrial arts, trade and technical, agriculture, and the distributive education specializations. The total staff or a cross section of staff members must be involved in the planning if a meaningful program is to result.

At the present time it seems unlikely that all educators will immediately see occupational education at all levels of learning as being vital to the welfare of everyone, but it is a step in the right direction to attempt to make educators and the public aware of the value of such a program. This can only be done by improving the quality of existing programs and publicizing the achievements of graduates who have become a success as a result of occupational training.

Improving the Quality of Occupational Programs and Teachers

During the surge toward more and larger programs in vocational education, some concern has been expressed about the quality of the program and the teachers who influence the participating students. Coe (16, p. 16) stated that in our present drive to reach more students we may be hurting them more than helping them. Many programs are based on unsound principles, taught by occupationally unqualified teachers, and hastily structured to take instant advantage of federal funds.

Relevancy

Relevancy has been a concern of educators in recent years, and as a suggestion for improving the relevance of vocational education, Lamar (43, p. 33) stated that it must constantly address itself to (1) the educational needs of people, (2) the manpower requirements of the labor market, (3) the educational resources needed to prepare each individual for his career, and (4) the analysis of the educational product--that is the competencies of each individual as a producer in the labor force.

Johnson (40, p. 1) further emphasized the importance of developing educational programs that relate to the needs of individuals and help them adapt to change. She said,

> One of the important goals of the school today is to provide students with challenging and stimulating preparatory experiences that will enable them to meet the demands of today's accelerating and changing society. Providing students with the kind of education that will enable them to meet the current demands of daily living has been one of the pertinent problems encountered by school administrators. It must be recognized that adequate preparation is essential if the students are to meet their obligation to society, make maximum contributions to the society of which they are members, and develop their potential as individuals to the fullest extent.

Career Education

Many educators have discovered the need for a total career education for today's students rather than a narrow course of study which may be obsolete in a few years. In observing that vocational education is both a process and a product, Lamar (43, p. 33) noted that the total educational experience of each individual should be viewed as the process of career development. It should be planned in terms of behavioral objectives and measured in terms of performance at each step up the career development ladder. The product represents the individual's behavior expressed in terms of knowledge or understanding, beliefs or attitudes, and psychomotor skills.

Several writers have expressed the belief that career education should begin in the early years of a child's schooling and continue through life. Children, as well as all people, need to learn that all work has dignity and is useful to society. Rowe (57, p. 59) recommends that from the time they enter the first grade, all students should be made aware of this precept; it is the first prong in the two-pronged task of developing a strong work ethic. The second prong is to promote the concept that work satisfies one of man's basic needs.

Hoyt (33, p. 36) stated that the future will see the ideal career more and more as a function of the personal value system of the worker. The ideal career, then will be generically defined as one that is of maximum meaningfulness to the worker as part of his total lifestyle. If children have been exposed to the value and meaningfulness of all work from their early education, they will be better equipped to choose a type of work in which they can be satisfied and successful as young adults.

Dull (20, p. 218) suggested a career orientation program that would involve all disciplines as they relate to student experiences and occupational information. The career orientation program through cluster study would present to students:

1. A more adequate knowledge of jobs and career alternatives in our technological society
2. A knowledge of the economics necessary for participating in a technological society
3. A knowledge of the kind of education or training required and work traits necessary in obtaining employment and in gaining access to jobs and careers
4. A self-appraisal regarding personal skills, abilities, and life aspirations
5. An opportunity to develop attitudes toward the world of work which enable one to fulfill his job career goal
6. An opportunity to develop the attitude that socially useful work has dignity and worth

Fanelli (22, p. 53) described career education as a broader approach to the educational experience. He said it is designed to play a part in almost every facet of the student's educational experience beginning in the earliest grades and continuing through his exit from high school and even beyond. Rather than being limited to job skill training, it seeks to engage the student across a broad spectrum, including his attitude toward work, his awareness of his own talents, potential, and interests, and his ability to make an informed and intelligent decision.

Another advantage of career education as observed by Moore (45, p. 259) is that instead of fostering grade competitiveness, students can be encouraged to be helpful to one another. Each person, if he feels of equal worth, will aid others in achieving their individual goals. A student becomes a worker who not only realizes his individual

responsibility, but appreciates the need for interdependency with fellow workers.

Torp (65, p. 86) viewed career education as an educational method whose goals encompass the highest priority society places on a student: his or her career. This method uses the commonalities in existing education, inserts career orientation as a major goal in every subject taught, and provides more personal experiences from which students can make career choices.

> It is unrealistic to expect a student to select and prepare himself for his occupational interest when he has had only limited exposure to what is available; furthermore, he cannot be expected to prepare to meet the educational or skill requirements if he must gain actual experience after high school. It is the job of education to provide an educational system which presents these experiences as part of its overall goal.

Reinhart (52, p. 76) expressed views similar to other educators when he wrote that it is essential that each person know himself and develop a personal value system; perceive the relationship between education and life roles; acquire knowledge of the wide range of careers; be able to perceive processes in production, distribution, and consumption relative to his environment; be able to use information in determining alternatives and reaching decisions; acquire and develop skills which are viewed as ways that man extends his behavior; develop social communication skills appropriate to career placement and adjustment; and develop appropriate feelings toward himself and others. However, he also cautioned those implementing career education with a statement that the headlong rush to install career curricula is a grave concern. Most of the current curricula that have been assessed are mediocre or poor, and there is no evidence that they fulfill their claims. A sound management of curriculum development is crucial or

the entire career education movement will be jeopardized (52, p. 77).

Career education should be well planned and implemented throughout elementary and secondary education. It is also of value to adults who may need additional training in a post-secondary education setting. Worthington (69, p. 213) explained that career education is a lifelong, systematic way of acquainting students with the world of work in their elementary and junior high years and preparing them in high school and in college to enter into and advance in a career field of their own choosing. For adults, career education is a way to reenter formal education and upgrade their skills in their established career field or to enter a new career field. Crum (18, p. 26) summed up the thoughts of many regarding career education when he said the hope of reformation in vocational education lies in a career education system for every individual throughout his lifetime.

Competency-Based Training

Performance and achievement of specific competencies are necessary in all forms of vocational and occupational education. A certain amount of knowledge and expertise are basic to success in any type of occupation. Educators and employers are concerned not only with competencies related to psychomotor skills, but those needed in human relations and attitudinal development as well. Morton (47, p. 19) suggested a reorientation of vocational education to include a system for vocational, technical, and occupational training based on measurable performance.

Klingstedt (42, p. 10) explained competency-based education as follows:

> Competency-based education is based on the specification or definition of what constitutes competency in a given field.

> Usually, a great deal of 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 performance 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.

Alschuler and Ivey (3, p. 53) supported the need for more competency-based education in their statement that holding students accountable for mastery of irrelevant knowledge defeats them and the purpose of humane education. The first task in establishing competency-based education is to determine what is relevant both to students and to society. There are extensive data suggesting that if teachers were completely faithful to the needs of students in preparing them for an effective, satisfying life after school, there would be a dramatic shift in emphasis from academic curricula to psychological and vocational curricula. Alschuler and Ivey (3, p. 55) stated further that

> Training in achievement motivation, human relations skills and moral development all represent specific commitments to provide individuals with what they need to make their own choices. All of these curricula are based on research and conceptual frameworks showing that individuals who receive such training will be better prepared to live effectively after school. Finally, we all hope that when students have learned to choose their own goals and attain those goals through a sequence of alternative procedures, several other attitudes may emerge: a respect for different viewpoints of others; the ability to live with failures and persist until goals are reached; and the self-confidence and self-esteem that result from succeeding.

Tuckman (66, p. 47) observed that the opportunity for adjusting the self to meet the requirements of the world of work has received minimal attention in educational attempts to provide for career development.

Schools have concentrated on a cognitive approach. Cognitions represent knowledge and information that students can gain about the world of work through field visits, formal presentations, question-and-answer periods, and occupational libraries. An equally important, but often neglected area of human functioning is the affective domain which includes attitudes, feelings, and motives.

As a solution to the problem of including all the domains of learning in the occupational curriculum, Bottoms (11, p. 26) suggested that vocational teachers and counselors need to devise learning experiences to achieve the following kinds of objectives:

1. To arrange opportunities for students to examine and compare their own emerging personal values of work with those of others--their employers, their fellow students, and professional, technical and skilled workers

2. To organize vocational classes that allow each student to demonstrate a work value in the context of a variety of environmental demands that have a personal meaning for their lives

3. To help employers gain insights into ways in which work can have greater meaning for vocational graduates

4. To help each student become psychologically prepared for the reality of the work setting--its drudgery and its buoyancy; its expectations and its rewards; its responsibilities and its satisfactions; its demands and its personal fulfillment

5. To enable students to continue to learn about themselves and to relate the knowledge to the vocational area they are pursuing so that they can confirm or reject the decision that counts

6. To help them recognize inconsistencies in their own work values and to explore ways of resolving those discords

7. To allow students to examine future work trends and the impact they might have on their own work values.

Such a curriculum should not only give occupational students the

knowledge and psychomotor skills needed to handle a job, but also should help them develop attitudes that could help them to be a success in life.

Work Experience

One of the ways of achieving competence for the world of work is through actual on-the-job experience. Many occupational programs provide simulated work experience for the participants. Others provide a cooperative program where the student works part time for an employer in addition to attending classes. Most studies have shown that the latter is the type of training preferred by the students. Nelson (49, p. 16) reported that according to the students in her study, the strong programs were those where the teacher actively sought work experience opportunities for her class and helped students make the initial contacts with employers. Students wished to go out on jobs early in the course in order to earn money and for more varied experience. Johnson (40, p. 38) supported the idea with her statements:

> If classroom instruction, planned observations, and actual work experience are required for courses with occupational emphasis, it is possible that the student would be better prepared to enter the world of work. Instruction becomes more meaningful and beneficial when theory is put into practice in actual work situations. A student's concept of work becomes more realistic after he has had an opportunity to engage in a worthwhile occupation. Such programs would provide experience with guidance and support from the teacher and employer that would enable the student to gain self-confidence.

Vocational educators should include people from industry to help in planning cooperative education for students and in designing the curriculum for the classroom. Part of the responsibility of making instruction more reality-oriented properly belongs to industry, which is

a direct beneficiary of strong vocational training (68, p. 49).

One of the most frequent employers of vocational school graduates is the apparel industry. Manufacturers report that training a new power machine operator to a normal level of efficiency runs up to $1,500. As a result, employers actively recruit individuals who, by virtue of their training, can reduce or eliminate that cost (68, p. 50).

As another aid to planning work experience for occupational home economics students, Hill (31, p. 43) suggested that educators who have insights regarding family structures, patterns of combining homemaking with paid employment, and the potential for applying the knowledge and skills of home economics in a variety of occupations need to help ask the questions to get the answers which will be useful in planning. The kinds of information collected and the manner in which it is analyzed and presented should be influenced by leaders in home economics education.

Terrass (63, p. 24) proposed that one of the future challenges in occupational home economics might be to learn what makes a job appealing. Jobs may vary in their appeal to different age groups, and some courses might be offered at adult level rather than at high school level. Working conditions, fringe benefits, and a livable wage all contribute to job appeal. Working through their state associations, home economists could attempt to improve service jobs related to home economics, which would help to encourage people to train for these jobs.

To be assured that occupational home economics students are well prepared for work experience, Smith (59, p. 71) stated that the home economics curriculum should include two program types of carefully planned occupational training courses in upper grade levels with basic

home economics as a required prerequisite. This combination would contribute to the students' employability through the development of salable skills and also develop sound attitudes toward their dual roles of homemaker and wage earner.

> The first task of any local school district is to provide a complete, well-balanced home economics program to meet the needs of children, youth, and adults in the local community. This program embraces two aspects: Home Economics Homemaking and Family Living Education--a general education program of instruction and guided activity for persons of all ages to promote the development of personal attitudes and values which contribute to the whole of living; Home Economics Occupational Education--a specialized program of education and training to aid in the development of attitudes and job competencies, salable on the job market, which lead individuals to find satisfying remunerative employment in entry-level occupations utilizing the knowledge and skills of the field of home economics (64, p. 53).

All available and interested people from industry, education and the general public should be consulted and utilized in planning effective homemaking and occupational home economics programs in a community. Hurt (36, p. 17) stated that the curriculum and teaching of occupational home economics will be relevant and more jobs will emerge for which trained personnel are needed if teachers continue to seek the advisory help of agencies, businesses, or organizations which employ the trainees. As a result, home economics programs will expand and make valuable contributions not only to those who receive the training, but also to individuals and families in the community.

> The students, themselves, need to become better acquainted with the possible occupational opportunities; they need to become more aware of their own strengths and weaknesses; and they need to have an opportunity to select the area where their interests and skills make them both competent and contented workers (50, p. 72).

Many of these suggestions for program improvement have been implemented in some schools throughout the country. Others are working

toward that goal. Lamar (43, p. 33) summed it up by stating that if the educational program can be tailored to the interests, needs, and capabilities of each student, it will have a built-in holding power to keep students in school until they acquire the social, communication, and vocational skills neede to obtain and maintain employment.

Occupational Competency of Teachers

Beasley (7, p. 1) wrote that a problem of growing concern for vocational and technical education is that of improving the occupational competency of teachers. The rate of technological change makes previously acquired job skills obsolete within a short period of time and, thus, creates a demand for new ones. New avenues and arrangements must be found for improving the occupational competency of teachers in order to meet the demand for skilled and recently trained workers.

Hughes (35, p. 40) suggested that more in-service programs should be planned and presented to meet the needs of home economics teachers, as most teachers whom she surveyed believed that present in-service education programs were not meeting their needs. Hurt (36, p. 13) reported that teacher education programs have been expanded to offer training for teachers of occupational home economics.

Johnson (40, p. 55) stated that if a five-year cooperative program of home economics education and coordinated home economics related employment for pay were offered, competencies could be realized in areas of specialization, breadth and depth of practical and theoretical knowledge that will enable an individual to meet his responsibility as a teacher or in other types of employment. Educators tend to resist adding an extra year's work to an undergraduate degree, but in the case

of occupational training it may be necessary to add more credit hours than are presently required for vocational certification in order to have a well rounded educational background and the occupational experience necessary for employment.

In discussing the role of teachers today in occupational fields, Marland (44, p. 204) observed that teaching, perhaps more than most fields, tends to be somewhat insular, in that education students by and large complete work for one or more college degrees only to return immediately as professionals to the schools without firsthand knowledge of what it takes to be successful in a specific occupational field. He suggested that prospective teachers contact persons who work in specific occupational careers and obtain practical information from them.

Competency-based education is as important for the teacher as for the high school student or any other occupational trainee. Aubertine (4, p. 39) stated that when working within a competency-based program with specified objectives and performance assessment procedures, teachers are accountable for their part in the instructional process. They should be specialists in their field and have extensive experience and education not only in teaching techniques, but also in curricular design and evaluation. Moreover, they should be adaptable in working with colleagues not only within their particular subject disciplines, but across disciplines as well, for this kind of education calls for an interdisciplinary approach.

The occupational teacher must be competent in the skills related to the specific area in which he or she is teaching. In Minnesota's Guide for Cooperative Vocational Education, it was suggested that

> Another source of cooperative vocational education staff members not to be overlooked is the personnel employed in

> local firms. Usually, there are several individuals employed in business and industry who are potentially excellent prospects for the teacher-coordinator position because they know their occupational field and how to go about preparing students for job entry and advancement. In addition, they are effective in maintaining the desired relations with participating employers. Personnel drawn from business and industry usually must take special courses and training to qualify for teaching; however, in some situations their services may be so essential to the success of a cooperative vocational education program that a school might wish to consider providing the means whereby the additional training can be obtained (27, p. 92).

The occupational teacher should have training related to teaching methods, curriculum development and other aspects of education. Ridley (55, p. 13) indicated in her research that on a pre-test, the participants "agreed" that wage-earning teachers do not have to meet certification requirements for teachers. After a seminar in which they explored the aspects of the total expectations for occupational teaching, they "strongly disagreed" with the above statement. The participants also indicated that work experience should be introduced at the college level for teacher preparation.

Hurt (36, p. 17) also observed the need for work experience for the potential occupational teacher. She stated that changes in vocational home economics education for youth and adults in schools have led to changes in teacher education programs at the pre-service and in-service levels. Teachers of occupational home economics courses need to have on-the-job experience.

Hill (32, p. 18) stated that teacher educators have the responsibility of broadening and expanding the scope of the home economics education program to include gainful employment as an integral part of the total program. This may be done by (1) considering programs designed for gainful employment into all methods courses and student

teaching and (2) providing courses and experiences for in-service and pre-service teachers which enable them to acquire skills and knowledge needed for teaching in occupational training programs.

Hill (32, p. 19) also pointed out the need for educators to keep occupational knowledge current. She recommended that in order to be able to orient youth and adults to the world of work, teachers and supervisors need to re-orient themselves. Because of the innovations in methods, materials, and organizational structure of businesses and industries, recency of work experience is of vital importance.

When planning a university course of study for home economists who plan a future affiliation with business, Dunn (21, p. 27) suggested that in addition to having knowledge in one area of specialization, university training should instill discipline of work, knowledge of the principles behind the skills, acceptance of responsibility, and the ability to plan and reason in logical sequence. In addition, students need a healthy philosophy toward persons in authority, and the application and management of time, energy, and money. They also need to be both a thinker and a conscientious doer. This goes a long way in eliminating the fatigue factor, the frustration and the shock that comes from hard work in business.

Performance-based teacher certification may become very essential in the choice of teachers for occupational programs in the future. Burdin (15, p. 6) indicated that the adaptation of performance-based approaches to teacher certification could enhance the credibility of the certification process and strengthen teaching as a profession. Public confidence in the profession of teaching would be greatly enhanced (a) if it were possible to describe the candidates' demonstrated

skills and knowledge and (b) if it were also clear that these are skills and knowledge which are not normally possessed by non-teachers. This could also have a salutary effect on the self-image of teachers.

The occupational teacher, as well as all other teachers, should show a positive attitude toward his or her work. Employers, educators and others have indicated that one of the most important aspects of the occupational student's training should include development of a good attitude and respect for his responsibility to the world of work. If this is to be achieved, Hudson (34, p. 39) indicated that the teacher should communicate, through his or her actions, the kind of work ethic that the student is expected to emulate. By the teacher's example, the student learns the difference between a day's work for a day's pay and merely putting in eight hours. By the teacher's response to a job, the student perceives work as a gratifying, fulfilling experience, or a one-way ticket to boredom.

Rowe (57, p. 60) stated that teachers who help students develop to their maximum potential regardless of ability demonstrate a concrete example of the work ethic--enjoyment of work. They show a positive attitude toward teaching, recognize the worth of the individual, and reinforce the concept of the dignity of work.

Baker (5, p. 35) purported that teachers are all-important in the career decision-making process. Research indicated that more than half of students' career decisions are influenced in varying degrees by teachers. Because of this influence, teachers' attitudes toward career education, the world of work, and college training are important factors in their own acceptance and implementation of the career-education concept.

Baker (5, p. 37) also stated that career education is likely to be only as effective as its builders--the teachers. Poorly prepared teachers will provide ineffective educational systems. He charged teacher education institutions with the responsibility of ensuring that in-service and summer offerings are current and relevant. They must change their emphases to ensure that younger teachers are not being prepared with obsolete skills and ideas. They must also allow the experienced teacher the opportunity to explore, examine, and make plans for innovation.

Teacher certification is one of the methods which all states use as an attempt to ensure adequate preparation of teachers for their specific positions. The State of Missouri has the following certification requirements for secondary occupational home economics teachers (29, p. 120):

Five-year Certificate:

1. BS degree in appropriate field

   2,000 clock hours of work experience in the area of instruction. Work experience will be determined by the amount of paid, volunteer, and required supervised practicums.

2. Persons with less than a BS degree may be employed to teach occupational home economics courses other than child care. The candidate must demonstrate knowledge and skill of the job for which the training is designed, have a minimum of 3,000 clock hours of work experience, and have 18 hours or the equivalent in professional education (eight of which is approved vocational education).

Two-year Certificate:

Two year certificates are granted to candidates with less than the required educational hours or work experience. Deficiencies shall be determined by the Department of Elementary and Secondary Education. The minimum amount of work experience for temporary certification is 1,000 clock hours.

Renewal of Certificates:

> Five-year: To renew the five-year certificate, attendance at workshops and in-service conferences approved by the section director is required plus one of the following:
> 1. A two semester-hour credit-bearing course relating directly to the subject taught, or
> 2. 320 clock hours of work experiences designed to expand and update in the job area.
>
> Two-year: The two-year certificate is renewable twice with evidence that approximately one-third of the educational deficiencies have been removed at the time of renewal. At the end of six years, when all deficiencies must be removed, a five-year certificate may be granted. Attendance at approved workshops and conferences is expected.

Lifetime certification may be obtained for teaching vocational consumer homemaking education on the secondary level in Missouri upon completion of a BS degree in vocational home economics at a qualified institution. The specific course requirements are given in the Handbook for Vocational Education in Missouri (29, p. 105). Lifetime certification may also be awarded general home economics majors in Missouri who have completed a BS degree in education in a regular home economics program which does not include courses in vocational methods of teaching.

Summary

Vocational education has existed throughout the history of mankind in one form or another. A recent renewal in occupational emphasis as a form of vocational education has brought with it new legislation governing vocational and occupational programs. The legislation has provided for development of new programs and expansion of existing ones to provide more opportunities for greater numbers of people who are seeking training or retraining in an occupational area.

The rapid growth of occupational education in recent years has

created problems of adjustment in secondary, post-secondary, and adult education. A need is evident for research and evaluation of existing programs to give a basis of information from which to make decisions for improvement of all occupational education.

Industrial growth and the lack of emphasis on training the high school age student for an occupation requiring less than a college degree has created a void in the job market. Employers are eager to hire trained personnel in industry, but have found that such people are not available. Occupational training can fill that need with well planned programs, well prepared teachers, and interested students.

Some educators have shown a reluctance to become involved with occupational education. Others have seen it as being of real importance to the world's economy today and are eager to gain the expertise required to work in such an educational program.

Concern has been expressed regarding the quality of the present occupational programs and the teachers who are implementing them. Emphasis is being placed on the relevancy of the program content and on developing a total career education process which would begin in kindergarten and continue on through high school and into post-secondary and adult education.

Work experience has been found to be important for both students and teachers in the occupational programs. Simulated experiences are provided in some schools, but on-the-job experience has been described as being the most valuable.

Teacher educators have discovered that they must plan their college programs to provide for more extensive training for prospective occupational teachers. New courses have been developed to better acquaint the

college student with methods of teaching occupational courses. On-the-job experience in a specific occupation is being suggested or required in many institutions. Occupational teachers need to be well trained in education, in business and industry, and have a positive attitude toward work which will inspire and influence their students.

Leaders in vocational training programs are utilizing information from industry, education and other sources to plan better occupational training for all. They wish to assure the best curriculum for students and the best training possible for the teachers who will implement it.

CHAPTER III

METHODS AND PROCEDURES

Three objectives were the foci of this study. They were (1) to determine the entry-level clothing careers which students were entering, or could enter, upon completion of secondary occupational programs in high schools or area vocational schools in Missouri, (2) to determine the entry-level competencies and degree of importance of each competency in performing tasks required in the clothing related occupations, and (3) to suggest improvements for high school occupational clothing program curricula and for preparation of teachers who will teach textiles and clothing related courses in occupational programs. This chapter describes the design of the research, the population studied, the procedure used in developing and implementing the data gathering instruments, and the procedures used in analyzing the data.

Research Design

The type of information desired for this study was most reliably gained through a descriptive survey research design. Kerlinger (41, p. 393) described survey research as:

> that branch of social scientific investigation that studies large and small populations by selecting and studying samples chosen from the populations to discover the relative incidence, distribution, and interrelations of sociological and psychological variables. . . . The survey researcher is interested in the accurate assessment of the characteristics of whole populations of people. . . . Survey research focuses on

> people, the vital facts of people, and their beliefs, opinions, attitudes, motivations, and behavior.

Personal interview and mail questionnaires were techniques chosen for gathering information for the survey research. Kerlinger (41, p. 395) wrote that

> Surveys can be conveniently classified by the following methods of obtaining information: personal interview, mail questionnaire, panel, telephone, and controlled observation. Of these, the personal interview far overshadows the others as perhaps the most powerful and useful tool of social scientific survey research.

Kerlinger (41, p. 397) stated that the mail questionnaire has serious drawbacks unless it is used in conjunction with other techniques. Two of these defects are possible lack of response and the inability to check the responses given. Returns of less than 40 or 50 percent are common. Higher percentages are rare. At best, the researcher must content himself with returns as low as 50 or 60 percent.

In this descriptive survey research, interviews were used to obtain information from employers and their opinions regarding the degree of importance of specific competencies for entry-level jobs. Mail questionnaires were implemented with teachers and graduates to obtain background information and also their opinions concerning the degree of importance of the same competencies for entry-level jobs.

Selection of the Sample

The total population of 1972 and 1973 graduates of high school occupational programs and secondary area vocational schools in Missouri who had completed one or more clothing service courses and who were or had been employed in a clothing related occupation were asked to participate in the study. The total population of the graduates' employers

and clothing service teachers were also chosen to be participants in the research. The population as defined above was small, therefore, it was decided to survey the entire population.

The 1973-74 Secondary Trade and Industrial Instructors and Chief Administrators Directory of the Industrial Education Section of the Missouri State Department of Education was one source of information concerning the secondary programs in occupational clothing services being offered in Missouri. Four schools were identified from that publication as having such programs. A request to the Home Economics Section of the Missouri State Department of Education resulted in identification of five additional programs and teachers.

Letters were written to administrators at each of the nine schools to ask their cooperation in providing a list of 1972 and 1973 graduates of their occupational clothing programs who had obtained employment in a clothing related occupation upon graduation and the names and addresses of their employers (see Appendix A, p. 123). Most of the letters were referred to school counselors or to the occupational clothing teachers for a reply. One of the programs was a junior high program; one had been discontinued because of lack of student interest; and one administrator did not wish to supply student information due to difficulties within his school system. Six occupational clothing programs were left to be used in the study. Thirty-four 1972 and 1973 graduates employed in clothing related occupations were reported by the schools. The lists of graduates revealed twenty-nine employed in industrial sewing; three employed in laundering and dry cleaning; and two employed as alteration specialists.

Ten teachers were employed as occupational clothing instructors of

high school students in the six occupational clothing programs. Eight were teaching occupational sewing courses and two were teaching laundering and dry cleaning. A list of fourteen employers included ten in industrial sewing; three in laundering and dry cleaning; and one in alterations.

Development of the Instruments

Nine data gathering instruments were developed for use in the study (see Appendix B, p. 131). They covered each of the three occupational categories represented: industrial sewing, dry cleaning and laundering, and alteration specialists. Three interview forms were developed for employers; three questionnaires for teachers; and three questionnaires for graduates.

The interview forms were designed to solicit information from employers on the titles of entry-level jobs which occupational clothing graduates may enter; the cost of training beginning employees; the rating which employers would give the occupational program training; suggestions for improving the training of occupational clothing students; and rating of the importance of specified entry-level competencies for employment of graduates.

Questionnaires were developed to be mailed to teachers and graduates participating in the study. The teacher questionnaire asked for information regarding the teachers' educational and occupational background; type of certification held; occupational courses taken; work experience; rating of the preparation of graduates in their occupational programs; suggestions for improving the training of high school students in occupational programs; suggestions for improving the training and

preparation of teachers for occupational clothing programs; and rating of the importance of specified entry-level competencies for employment of graduates. The questionnaires for graduates asked for information regarding the type of school from which they had graduated; the titles of jobs at which they had been employed; high school courses they had taken; reasons for leaving jobs if they were no longer working; rating of their training in an occupational program; suggestions for improving the training of students in occupational clothing programs; and rating of the importance of the same entry-level competencies submitted to employers and teachers. All three groups were asked to give their reaction to whether the listed competencies were:

1. Essential to employment - competencies which the beginning employee is expected to have in order to be hired.
2. Some advantage to employment - competencies helpful to employment, but not necessary for a person to be hired.
3. No advantage to employment - competencies which are of no value to employment.

Two publications, Fashion Industry Series (23) and Identification of Tasks in Home Economics Related Occupations: Clothing, Apparel and Textile Services (37), were sources used in listing entry-level competencies for the instruments. Other competencies were suggested by two industrial employers who were not part of the population of the study and three home economists who had worked with occupational clothing programs. The two employers and three home economists also served as a panel of judges who critically evaluated the questionnaires and interview forms for validity and made suggestions for their improvement.

Data Collection

The first stage of the study concerned collection of data from employers through implementation of the interview forms. It was originally intended that if the employers should suggest additional entry-level competencies, they would be used in developing the teacher and graduate questionnaires. However, no additional competencies were suggested so the list of entry-level competencies remained the same for all three groups.

Letters were mailed to fourteen employers asking their cooperation in the study (see Appendix A, p. 124). Printed, addressed postcards were enclosed for them to return with information regarding a suggested time for an interview and the name and telephone number of the individual to be interviewed. Follow-up letters were mailed to those who did not respond within two weeks (see Appendix A, p. 126). Ten employers (71%) agreed to be interviewed. Telephone calls were made to confirm the date and time for the interviews. The researcher conducted the interviews which took approximately 30 minutes of the employer's time.

Questionnaires were mailed to the ten teachers and thirty-four graduates in the population being studied. Cover letters accompanied the questionnaires and stamped, self-addressed envelopes were enclosed for their reply (see Appendix A, p. 127). Follow-up letters, again enclosing a questionnaire and stamped, self-addressed envelope, were mailed in two weeks to those who had not responded (see Appendix A, p. 128). Nine (90%) of the teachers responded to the questionnaires and twenty-five (73.5%) of the graduates returned completed questionnaires.

Method of Data Analysis

The background information, program ratings, and listed items on the nine instruments were hand tabulated and numbers and percentages of responses were recorded. Since only one employer, one teacher, and no graduates responded to the dry cleaning and laundering instruments, all of those results were hand tabulated with the exception of sections C and D which were common to all the instruments. Sections C and D of the instruments listed entry-level competencies which dealt with personal work habits and attitudes and general knowledge of the world of work. The alteration specialist instruments were also hand tabulated for the same reasons. Only one employer, one teacher, and two graduates responded to those instruments.

The data concerning entry-level competencies on all instruments were transferred to computer cards. The cards were processed to determine the frequency count and percent response on each item by each occupational group.

To test the differences among responses of employers, teachers, and graduates regarding whether each competency was in any way advantageous to entry-level employment, a 2 X 3 contingency table for chi square was used combining the results from the "essential" and "some advantage" columns of the questionnaires and interview forms into one column and testing them against the "no advantage" column as responded to by the three groups of participants.

Regarding the function of the chi square test for k independent samples, Siegel (58, p. 175) wrote:

> When frequencies in discrete categories (either nominal or ordinal) constitute the data of research, the χ^2 test may be used to determine the significance of the differences

among k independent groups. The χ^2 test for k independent samples is a straightforward extension of the χ^2 test for two independent samples.

Siegel (58, p. 175) provided the following chi square formula for k independent samples:

$$\chi^2 = \Sigma\frac{(O - E)^2}{E}$$

$$df = (k-1)(r-1).$$

The .05 level of critical value was selected as the level of significance for the differences found among k independent samples.

The chi square test was also used to determine the differences in the responses of the three groups (employers, teachers, graduates) to the three degrees of importance (essential, some advantage, no advantage) of each of the entry-level competencies. A 3 X 3 contingency table achieved this objective.

Summary

This chapter has described the descriptive survey research design used for the study. The selection of the sample, development of the interview forms and questionnaires, collection of data, and method of data analysis were reviewed. A panel of judges was used to verify the instruments before implementation. Interviews were conducted to obtain information from employers. Questionnaires were mailed to solicit responses from teachers and graduates of occupational clothing programs. Background information in the instruments was hand tabulated. A frequency count, percentage responses, and chi square tests of the significance of responses of the three groups to the entry-level competencies were obtained through computer analysis.

CHAPTER IV

ANALYSIS OF DATA

In developing and implementing this study, it was assumed that (1) present secondary occupational programs and area vocational schools in Missouri were adequately preparing some students for entry-level positions in clothing careers, (2) employers in clothing related occupations had determined a proficiency level of knowledge, skills, and judgment which they expected entry-level employees who have graduated from occupational clothing programs to have mastered, and (3) interviews with employers and questionnaire responses from teachers and graduates would provide information which could be compared for points of agreement and disagreement and utilized in suggesting improvements for high school occupational clothing course curricula and for preparation of teachers who will teach textiles and clothing related courses in occupational programs. The data presented in this chapter have been in keeping with the stated assumptions and with the three objectives of the study as reported on page 2. The data have been organized according to the three objectives in the following sequence:

Objective 1 - To determine the entry-level clothing careers which students were entering, or could enter, upon completion of secondary occupational programs in high schools or area vocational schools in Missouri.

1. Employer Response

2. Occupational Program Graduate Response

Objective 2 - To determine the entry-level competencies and the degree of importance of each competency in performing tasks required in the clothing related occupations.

1. Entry-Level Competencies Agreed Upon by Employers, Teachers, and Graduates
2. Entry-Level Competencies Showing Significant Differences

Objective 3 - To suggest improvements for high school occupational clothing program curricula and for preparation of teachers who will teach textiles and clothing related courses in occupational programs.

1. Ratings of Occupational Programs
2. Suggestions for Improvement of Secondary Programs
3. Description of Teachers
4. Suggestions for Improvement of Teacher Education Programs

Employer Response

Ten occupational clothing employers agreed to be interviewed. Eight were involved in industrial sewing; one in laundering and dry cleaning; and one in alterations. Of the eight in industrial sewing, four were in garment manufacturing, two in shoe manufacturing, and two in toy manufacturing.

Entry-Level Job Titles

All were asked about the titles of jobs for which graduates of

occupational clothing training programs in high schools or area vocational-technical schools have been employed, or could enter, in their company. All eight employers in industrial sewing mentioned sewing machine operator, power machine operator, or stitcher. The two employers in shoe manufacturing listed more specifically under that category the types of stitching which included fancy stitch, stitch linings, binding, top stitch, bind insoles, English binding, Barbour trim, and French binding. Other entry-level jobs indicated by the industrial sewing employers were presser, bundler, servicer, cutter, receiver, shipper, packer, hand ironer, quality control inspector, and operation instructor. The alteration specialist employer gave seamstress and alterationist as entry-level job titles. The laundering and dry cleaning employer listed the entry-level jobs of shirt press operator, ladies press operator, washman, presser, and finisher. See Table I.

On-the-Job Training Costs

The employers were asked to estimate the cost of training a person for entry-level employment if the employee had received no previous occupational training or experience. The dry cleaning and laundering and the alteration specialist employers estimated $300 as the cost of training beginning employees before they become productive. The estimated cost of training industrial sewing beginning employees ranged from $500 to $2,000. Four of the employers gave an estimate of $1,000 to $1,500. One employer mentioned each of the remaining figures of $500, $600, $800, and $2,000. One employer in shoe manufacturing pointed out

TABLE I

TITLES OF ENTRY-LEVEL JOBS WHICH EMPLOYERS INDICATED OCCUPATIONAL TRAINESS MAY ENTER

Industry	Ind. Sew.* N = 8	Alt. Spec.** N = 1	L. and D.C.*** N = 1
Industrial Sewing:			
Power Sewing Machine Operator	8		
Fancy Stitch	2		
Stitch Linings	2		
Binding	2		
Top Stitch	2		
Bind Insoles	2		
English Binding	2		
Barbour Trim	2		
French Binding	2		
Presser	1		
Bundler	1		
Servicer	1		
Cutter	1		
Receiver	1		
Shipper	1		
Packer	1		
Hand Ironer	1		
Quality Control Inspector	1		
Operation Instructor	1		
Alteration Specialist:			
Seamstress		1	
Alterationist		1	
Laundering and Dry Cleaning:			
Shirt Press Operator			1
Ladies Press Operator			1
Washman			1
Presser			1
Finisher			1

*Industrial Sewing Employers

**Alteration Specialist Employer

***Laundering and Dry Cleaning Employer

Participants gave more than one response, so the number of responses will not total the number of participants. Numbers refer to the number of times that response was given.

that the cost of the materials ruined by a beginning employee added a considerable amount to the cost of his or her training. See Table II.

TABLE II

EMPLOYERS' ESTIMATED COST OF TRAINING BEGINNING OCCUPATIONAL CLOTHING EMPLOYEES

Estimated Cost	Ind. Sew.* N = 8	Alt. Spec.** N = 1	L. and D.C.*** N = 1
$ 300.		1	1
500.	1		
600.	1		
800.	1		
1,000.-1,500.	4		
2,000.	1		

*Industrial Sewing Employers

**Alteration Specialist Employer

***Laundry and Dry Cleaning Employer

Difference Made by Occupational Training

When asked if occupational training made an appreciable difference in the time it takes for the employee to become productive at his job, six of the industrial sewing employers answered, "yes", and two answered, "no". All six of those responding affirmatively stated that the training coud make a difference of about half of the time usually required to train an inexperienced employee, or from $500 to $600 in the monetary value of the training. Those who replied negatively stated

that a good program geared toward their specific industry could make a difference, but the one in their community did not. One stated that the training program in the school in his area only makes a difference of perhaps $100 or one week of on-the-job training. The employers interviewed for alteration specialists and laundry and dry cleaning said occupational training does make a difference in the time it takes for the employee to become productive on the job. These employers stated that, with good training, the employee could start on the job without further training and be productive immediately.

Advancement Opportunities

When asked what the advancement opportunities were in their specific company for graduates of high school occupational clothing programs, the eight industrial sewing employers replied that the graduates could advance to any job including supervision and management positions if they had the ability and the initiative. More specifically, the industrial sewing employers indicated that entry-level employees could advance from sewing machine operator to quality control inspector, sewing machine instructor, supervisor, engineer, sewing superintendent, area production manager, and plant manager. The alteration specialist employer stated that the employee could eventually go into business for himself/herself if his/her work became well known. The laundry and dry cleaning employer stated that advancement opportunities were good and the employee could advance to any position. He/she might become an engineer, route man, manager, or could own his/her own business.

Wages for Entry-Level Employees

In answer to the question, "Do you usually hire occupational program graduates at a higher wage than totally inexperienced beginning employees?" all employers replied, "No". Two explained that union contracts do not permit hiring the occupational trainee at a higher wage, but they can work up to a higher wage more quickly than a totally inexperienced person. One employer stated that occupationally trained employees and totally inexperienced employees were all hired at the minimum wage, but the occupationally trained person could advance to 15¢ more per hour within a few days if he were productive.

Occupational Program

Graduate Response

Twenty-five graduates of occupational clothing programs in Missouri responded to questionnaires. Fourteen had completed high school in 1972; eleven were 1973 graduates. All were female. There were four male graduates in the population, but none responded to the questionnaire. Three of the male graduates had been employed in laundering and dry cleaning; one had been employed in industrial sewing. Eight of the twenty-five graduates responding had received their occupational training in a traditional high school; seventeen had received their occupational training in an area vocational-technical school.

Job Titles

The graduates were asked to give the titles of their present or most recent clothing related job. Twenty listed Sewing Machine Operator; two specified that their job title as power sewing machine

operators was Fancy Stitcher; and one gave her job title as Binder. Two had worked as Alterationists with one listing her job title as Dressmaker, Alterationist. See Table III.

TABLE III

JOB TITLES OF PRESENT OR MOST RECENT CLOTHING RELATED OCCUPATION OF TWENTY-FIVE GRADUATES

Job Titles	No. of Graduates
Sewing Machine Operator	20
Fancy Stitcher	2
Binder	1
Alterationist	1
Dressmaker, Alterationist	1
Total	25

Jobs Held Since Graduation

Ten of the twenty-five graduates reported having acquired occupational clothing related jobs since graduation and were still working at those jobs. The longest period of such employment for graduates in the group was one person who had worked 36 months (3 years). Two who were still working at clothing related occupations reported having worked at the jobs for 20 months; another person had worked for 18 months; and one for 17 months. One had worked 14 months; two had worked 12 months; one, 10 months; and one, 9 months.

Fifteen of the twenty-five graduates had been employed in clothing related jobs, but were not working in the positions at the time of the

research. Three of the graduates reported that they had left occupational clothing related jobs because they married; one left because of health; two reported having been laid off when no more work was available; and three reported working only as summer employees. Three graduates left their clothing related jobs to attend college and three reported leaving their jobs because they did not like the work. Three graduates listed jobs which they had held outside the clothing field such as salesclerk, beautician, cashier, and typist. See Table IV.

Reasons for Not Being Employed

If they were not currently employed in a clothing related occupation, the graduates were asked to give their reasons for being unemployed or working at another occupation. Some responded with more than one reason. Four of the fifteen graduates who were not currently employed in a clothing related occupation declared that they did not like that type of work after they had tried an occupational clothing related job. Four left such work to continue their schooling; and three were not working because they had married. Two stated that the wages were not high enough in the clothing related occupations and two replied that they could not get a job in that field where they were living. One replied that her training was not adequate and one stated that she was laid off because her employer did not have enough work for her. Seventeen reasons were given by the fifteen respondents. See Table V.

This questionnaire item was different from the one reported in Table IV, p. 61. The respondents were encouraged to give as many reasons as they wished. In response to the item reported in Table IV, three graduates reported that they did not like the work in occupational

TABLE IV

JOBS WHICH TWENTY-FIVE GRADUATES HAVE HAD
SINCE GRADUATION FROM HIGH SCHOOL

Graduates	Job Title	Length of Time Employed	Employment Status or Reason for Leaving if not Working
1.	Fancy Stitcher	36 months	Still employed
2.	Seamstress, Fitter	20 months	Still employed
3.	Fancy Stitcher	20 months	Still employed
4.	Fancy Stitcher	18 months	Still employed
5.	Sewing Machine Oper.	17 months	Still employed
6.	Sewing Machine Oper.	14 months	Still employed
7.	Sewing Machine Oper.	12 months	Still employed
8.	Sewing Machine Oper.	12 months	Still employed
9.	Sewing Machine Oper.	10 months	Still employed
10.	Sewing Machine Oper.	9 months	Still employed
11.	Binder	21 months	Married
12.	Sewing Machine Oper.	10 months	Married
13.	Sewing Machine Oper.	4 months	Married
14.	Sewing Machine Oper.	1 month	Health
15.	Sewing Machine Oper.	6 months	Laid off
16.	Stock Clerk	3 months	Temporary
	Sewing Machine Oper.	3 months	Laid off
17.	Sewing Machine Oper.	1 month	Summer job
18.	Sewing Machine Oper.	2 months	Summer job
19.	Sewing Machine Oper.	3 & 2 months	Summer jobs
	Salesclerk	7 months	Still employed
20.	Sewing Machine Oper.	6 months	College
21.	Sewing Machine Oper.	5 months	College
22.	Sewing Machine Oper.	2 months	College
23.	Sewing Machine Oper.	6 months	Didn't like it
	Beautician	12 months	Still employed
24.	Sewing Machine Oper.	2 months	Didn't like it
25.	Alterationist	1 month	Didn't like it
	Cashier	3 months	College
	Typist	12 months	Still employed

clothing related jobs. In this item, four stated that they did not like the work. In Table IV, none mentioned low wages as a reason for leaving jobs. Two graduates gave low wages as a reason for leaving in responding to this item. Two also said they could not get a job where they were living. None responded to the former questionnaire item in that manner. None replied that inadequate training was a problem in the former item, but one listed that as a reason in answering this question. Other reasons given in Table IV that were not mentioned again in answering this question were health, temporary work, and summer jobs.

TABLE V

REASONS GIVEN BY FIFTEEN GRADUATES FOR NOT BEING CURRENTLY EMPLOYED IN A CLOTHING RELATED OCCUPATION

Reasons	Number of Times Reasons Were Given
I do not like that type of work.	4
I am in school.	4
I am married and do not wish to work for that reason.	3
Wages are not high enough.	2
I cannot get a job in that field where I am living.	2
My training was not adequate.	1
I was laid off because there was not enough work for me.	1

Beneficial Courses

The course mentioned most frequently by the graduate respondents

as having helped them obtain and hold jobs in clothing related occupations was Industrial Sewing which was listed by 17 of the 25 graduates. Occupational Sewing was listed by 6 graduates; Tailoring given by 4; and Home Economics Classes by 3. Commercial Sewing, Clothing Care Services, Dressmaking, Fashion Sewing, and Clothing Classes were all listed once, as were Interior Decoration, English, and Typing. See Table VI.

TABLE VI

COURSES WHICH HELPED GRADUATES OBTAIN AND HOLD JOBS IN CLOTHING RELATED OCCUPATIONS

Course Titles	Number of Graduates Mentioning Course
Industrial Sewing	17
Occupational Sewing	6
Tailoring	4
Home Economics Classes	3
Commercial Sewing	1
Clothing Care Services	1
Dressmaking	1
Fashion Sewing	1
Clothing Classes	1
Interior Decoration	1
English	1
Typing	1

On-the-Job Experience

Only two graduates reported having any on-the-job occupational experience in clothing related occupations outside the classroom while they were in high school. One of those said that she had sewn a lot

at home; the other reported sewing for a bridal shop for two months.

Eighteen of the twenty-five graduates replied that they had needed more on-the-job experience before completing the occupational training program. Seven said they did not need more on-the-job experience before graduation.

Entry-Level Competencies

Entry-level competencies were listed on the research instruments in four categories: Working Competencies; Related Knowledge; Personal Work Habits and Attitudes; and General Knowledge of the World of Work. Participants were asked to respond to the degree of importance of each competency as: essential to employment, some advantage to employment, or no advantage to employment.

Entry-Level Competencies Agreed Upon by Employers, Teachers, and Graduates

In many instances, the employers, teachers and graduates were in close agreement on the degree of importance of the competencies. In the category of Working Competencies, using a power machine, using correct measuring techniques, repairing imperfect work, and demonstrating manual dexterity were all rated as essential by a high percentage of the combined groups. Competencies which included cutting parts of garments from layers of cloth with an electric cutting machine and/or manual cutting machine, laying fabric by hand or with a spreading machine, cutting individual garments by hand, and reading instruction manuals were rated as being of no advantage to employment by a large percentage of the participants. A high percentage of all groups rated the

competencies listed under Related Knowledge as essential or some advantage. All competencies listed under Personal Work Habits and Attitudes were rated as essential except for competency #10 which referred to the employee having an acceptable personal appearance. That competency was rated as being of some advantage, but not as essential as the others in that category. Knowing how to apply and interview for a job was rated as essential in the category of General Knowledge of the World of Work. The other competencies in that category were checked mainly as being of some advantage to employment. See Table VII.

Entry-Level Competencies Showing Significant Differences

Chi square for k independent samples was used to test the two hypotheses of the study. The .05 level of significance was chosen. However, several of the competencies were significant at the .01 level or beyond. Most of the competencies which were found to have a significant difference in responses were in the category of Working Competencies. In industrial sewing, this could have been partly due to three types of manufacturing being represented in that group. Those were garment, shoe, and toy manufacturing.

Hypothesis 1: There is no significant difference among the responses of employers, graduates and teachers of the secondary occupational clothing programs regarding the entry-level competencies considered essential or of some advantage for employment in the clothing related occupations of industrial sewing, dry cleaning and laundering, and alteration specialist.

In order to test this hypothesis, results from columns one and two

TABLE VII

DEGREE OF IMPORTANCE GIVEN TO INDUSTRIAL SEWING ENTRY-LEVEL COMPETENCIES IN COMBINED PERCENTAGES OF EMPLOYERS, TEACHERS, AND GRADUATES

	Entry-Level Competencies	Degree of Importance** 1 %	2 %	3 %
A.	Working Competencies The entry-level employee should be able to:			
*1.	identify color shades.	59	29	12
*2.	color shade bolts of cloth.	26	43	31
*3.	lay fabric by hand or with spreading machine.	15	41	44
4.	cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine	8	47	45
*5.	cut individual garments by hand.	17	35	48
*6.	sort cut parts and tie them into bundles.	7	63	30
7.	distribute bundles of garment parts and supplies to production workers.	5	71	24
8.	mark location points on garment parts.	29	52	19
*9.	use conventional type sewing machine.	49	34	17
10.	use a power machine.	87	13	0
*11.	organize work space and equipment.	39	26	35
12.	recognize machine problems.	47	52	1
13.	do minor machine repair, replace needles, etc.	63	36	1
*14.	adjust sewing machines, stitching, etc.	56	40	4
*15.	use equipment and attachments.	41	51	8
*16.	read instruction manuals.	25	35	40
*17.	perform various construction techniques, seam finishes, etc.	50	44	6
*18.	set zippers in garments.	42	20	38
*19.	apply buttons, snaps, and other fasteners.	41	30	29
20.	use correct measuring techniques.	78	15	7
21.	repair imperfect work.	87	9	4
*22.	demonstrate manual dexterity.	84	9	7
*23.	hand sew buttons, hems, linings, finishing details.	30	32	38
*24.	use correct pressing techniques with steam pressing machine and/or hand iron.	29	32	39
25.	fold, pin, bag, tag, and box finished garments for shipping.	13	53	34

TABLE VII (Continued)

Entry-Level Competencies	Degree of Importance** 1 %	2 %	3 %
B. Related Knowledge The entry-level employee should:			
1. understand terminology specific to industrial sewing.	54	45	1
2. have a working knowledge of fabrics.	59	31	10
3. have a working knowledge of threads.	60	37	3
4. understand marking procedures.	80	19	1
5. recognize good quality work, seams, etc.	85	14	1
C. Personal Work Habits and Attitudes The entry-level employee should:			
1. be able to do good quality work.	91	9	0
2. be able to do a specific quantity of work.	82	18	0
3. cooperate with fellow workers.	68	32	0
4. accept supervision.	96	3	1
5. listen to and follow instructions.	98	1	1
6. be dependable.	95	4	1
7. have regular attendance.	96	3	1
8. have initiative.	79	20	1
9. be prompt.	98	1	1
*10. have an acceptable personal appearance.	44	55	1
11. adapt quickly to new situations.	74	23	3
12. be able to discuss work related problems with supervisor.	74	25	1
13. apply proper safety procedures in work situation.	90	9	1
14. be willing to do routine work.	84	15	1
15. be able to work under pressure.	74	23	3
D. General Knowledge of the World of Work The entry-level employee should:			
1. know how to apply and interview for a job.	89	8	3
*2. understand labor union membership.	28	55	17
3. know how to discuss wages.	30	62	8
4. understand employee benefits.	28	64	8
5. understand problems of industry or company management.	28	69	3

*Competencies which received a significant difference in response under various conditions explained later in the study.

**1 - Essential to Employment; 2 - Some Advantage to Employment; 3 - No Advantage to Employment.

of the data gathering instruments were combined and checked against column three. Respondents were asked to check column one if they thought an entry-level competency was essential and column two if it was only of some advantage. If the competency were of no advantage to employment, the individuals were to check column three.

Four competencies showed significant differences at the .05 level or beyond when the replies of all industrial sewing participants were compared (employers, teachers, graduates). Those showing significant differences under Working Competencies were competencies 9, 11, and 15. In competency #9, it was stated that entry-level employees should be able to use a conventional type sewing machine. Significantly greater importance was given this competency by employers and graduates than by teachers. Competency #11 referred to the entry-level employee being able to organize work space and equipment. It was checked as being of significantly greater importance by teachers than by employers and graduates. Competency #15 regarding the entry-level employees' ability to use equipment and attachments was noted to be of significantly greater importance by employers and teachers than by graduates. Of the competencies listed under General Knowledge of the World of Work, #2, understanding labor union membership was given significantly greater importance by employers and graduates than by teachers. See Table VIII.

TABLE VIII

ESSENTIAL ENTRY-LEVEL COMPETENCIES FOR INDUSTRIAL SEWING WITH SIGNIFICANT DIFFERENCES AMONG THE RESPONSES OF EMPLOYERS, TEACHERS, AND GRADUATES

Item No.	Entry-Level Competencies
	at the .05 level of significance
A.	Working Competencies The entry-level employee should be able to:
9.	use a conventional type sewing machine.*
11.	organize work space and equipment.**
15.	use equipment and attachments.***
D.	General Knowledge of the World of Work The entry-level employee should:
2.	understand labor union membership.*

*Significantly greater importance was given by employers and graduates.

**Significantly greater importance was given by teachers.

***Significantly greater importance was given by employers and teachers.

Due to the fact that industrial sewing was represented by three different types of manufacturing (garments, shoes, and toys), it was decided to determine the significant differences in responses when they were checked by types of manufacturing. Teachers' responses were not used in this analysis because their courses were not divided according to type of industrial sewing manufacturing. Significant differences were found only between responses of garment manufacturing employers and

graduates who had been employed in garment manufacturing.

Only the competencies listed under Working Competencies were affected. Competencies #1, 6, 17, 18, 19, 23, and 24 were found to be significantly different at the .01 level or beyond. Competency #1, identifying color shades; competency #17, performing various construction techniques, seam finishes, and so forth; and competency #23, hand sewing buttons, hems, linings, finishing details were all given significantly greater importance by employers than by graduates. Competency #6, sorting out parts and typing them into bundles; competency #18, setting zippers in garments; competency #19, applying buttons, snaps, and other fasteners; and competency #24, using correct pressing techniques with steam pressing machine and/or hand iron were all checked as of significantly greater importance by graduates than by employers. See Table IX.

TABLE IX

ESSENTIAL ENTRY-LEVEL COMPETENCIES FOR GARMENT MANUFACTURING WITH SIGNIFICANT DIFFERENCES BETWEEN RESPONSES OF EMPLOYERS AND GRADUATES

Item No.	Entry-Level Competencies
	at the .01 level of significance
A.	Working Competencies The entry-level employee should be able to:
1.	identify color shades.*
6.	sort cut parts and tie them into bundles.**
17.	perform various construction techniques, seam finishes, etc.*
18.	set zippers in garments.**
19.	apply buttons, snaps, and other fasteners.**
23.	hand sew buttons, hems, linings, finishing details.*
24.	use correct pressing techniques with steam pressing machine and/or hand iron.**

*Significantly greater importance was given by employers.

**Significantly greater importance was given by graduates.

Hypothesis 2: There is no significant difference among the responses of employers, graduates and teachers of the secondary occupational programs regarding the degree of importance indicated for each of the entry-level competencies needed for employment in the clothing related occupations of industrial sewing, dry cleaning and laundering, and alteration specialist.

When testing hypothesis #2, according to groups (employers,

teachers, and graduates), responses to five competencies were found to be significantly different at the .01 level and five at the .05 level. Responses to Working Competencies #1, 11, 14, 16, and 23 were significantly different at the .01 level. Competency #1, identifying color shades, was given significantly greater importance by employers than by teachers and graduates. Competency #11, organizing work space and equipment; #14, adjusting machines, stitching, and so forth; #16, reading instruction manuals; and #23, hand sewing buttons, hems, linings, and finishing details were all checked as of significantly greater importance by teachers than by employers and graduates.

At the .05 level, responses to competencies #2, 15, 17, and 22 under Working Competencies and competency #10 under Personal Work Habits and Attitudes were found to be significantly different. Competency #2, color shading bolts of cloth; competency #15, using equipment and attachments; and competency #17, performing various construction techniques, seam finishes, and so forth, were all given significantly greater importance by teachers than by employers and graduates. Competency #22, demonstrating manual dexterity was given greater significance by employers and teachers than by graduates. Under Personal Work Habits and Attitudes, competency #10, having an acceptable personal appearance, was checked as significantly more important by teachers than by employers and graduates. Of the ten competencies found to have a significant difference in responses, eight were given greater importance by teachers than by employers and graduates. See Table X.

TABLE X

ENTRY-LEVEL COMPETENCIES FOR INDUSTRIAL SEWING WITH SIGNIFICANT DIFFERENCES IN DEGREES OF IMPORTANCE ACCORDING TO EMPLOYERS, TEACHERS, AND GRADUATES

Item No.	Entry-Level Competencies
	at the .01 level of significance
A.	Working Competencies The entry-level employee should be able to:
1.	identify color shades.*
11.	organize work space and equipment.**
14.	adjust machines, stitching, etc.**
16.	read instruction manuals.**
23.	hand sew buttons, hems, linings, finishing details.**
	at the .05 level of significance
A.	Working Competencies The entry-level employee should be able to:
2.	color shade bolts of cloth.**
15.	use equipment and attachments.**
17.	perform various construction techniques, seam finishes, etc.**
22.	demonstrate manual dexterity.***
C.	Personal Work Habits and Attitudes The entry-level employee should:
10.	have an acceptable personal appearance.**

*Significantly greater importance was given by employers.

**Significantly greater importance was given by teachers.

***Significantly greater importance was given by employers and teachers.

Again, the competencies were tested according to type of manufacturing (garments, shoes, and toys) and using only employers and graduates. Significant differences were found only between responses of garment manufacturing employers and graduates who had been employed in garment manufacturing. At the .01 level, responses to the Working Competencies #17, 18, 19, 23, and 24 were found to be significantly different. Competency #17, performing various construction techniques, seam finishes, and so forth; and competency #23, hand sewing buttons, hems, linings and finishing details, were rated as significantly more important by employers than by graduates. Competency #18, setting zippers in garments; competency #19, applying buttons, snaps, and other fasteners; and competency #24, using correct pressing techniques with steam pressing machine and/or hand iron, were given significantly greater importance by graduates than by employers.

At the .05 level, responses to Working Competencies #1, 3, 5, and 6 were found to be significantly different. Competency #1, identifying color shades; competency #3, laying fabric by hand or with spreading machine; and competency #5, cutting individual garments by hand, were given greater significance by employers than by graduates. Competency #6, sorting cut parts and typing them into bundles, was given greater importance by graduates than by employers. See Table XI.

TABLE XI

ENTRY-LEVEL COMPETENCIES FOR GARMENT MANUFACTURING WITH SIGNIFICANT DIFFERENCES IN DEGREES OF IMPORTANCE ACCORDING TO EMPLOYERS AND GRADUATES

Item No.	Entry-Level Competencies
	at the .01 level of significance
A.	Working Competencies The entry-level employee should be able to:
17.	perform various construction techniques, seam finishes, etc.*
18.	set zippers in garments.**
19.	apply buttons, snaps, and other fasteners.**
23.	hand sew buttons, hems, linings, finishing details.*
24.	use correct pressing techniques with steam pressing machine and/or hand iron.**
	at the .05 level of significance
A.	Working Competencies The entry-level employee should be able to:
1.	identify color shades.*
3.	lay fabric by hand or with spreading machine.*
5.	cut individual garments by hand.*
6.	sort cut parts and tie them into bundles.**

*Significantly greater importance was given by employers.

**Significantly greater importance was given by graduates.

If the reader should desire additional information regarding a specific entry-level competency in industrial sewing and the reactions of research respondents to it, he may refer to the appendices for Tables XXII through XXXI, pp. 192 through 224, which give the chi squares for each competency by groups (employers, teachers, graduates), types of manufacturing (garments, shoes, toys) and degree of importance; and also the degree of importance given entry-level competencies in frequency and percent by each of the groups and by types of manufacturing. As an example, competency A1, "identify color shades," in Table XXII, p. 192, was found to have a chi square of 2.49 when the responses of groups were compared regarding whether it was essential or of no advantage. When responses were compared according to types of manufacturing, competency A1 received a chi square of 9.29 which showed that significantly greater importance was given the competency by garment manufacturers than by graduates who were employed in garment manufacturing. Competency A1 received a chi square of 15.35 when responses of employers, teachers, and graduates were compared. This showed that significantly greater importance was again given the competency by employers than by teachers and graduates. The competency received a chi square of 10.12 when responses were compared according to types of manufacturing. Again, it was indicated that garment manufacturers gave the competency significantly greater importance than did the graduates who were their employees.

Table XXIII, p. 197, shows that 7 (87.5%) of the 8 industrial sewing employers considered competency A1, "identify color shades," as essential to employment. One employer (12.5%) considered the competency to be of some advantage to employment. Table XXIV, p. 200, indicates

that 5 (71.4%) of the 7 industrial sewing teachers considered the competency to be essential; one (14.3%) found it to be of some advantage; and one (14.3%) thought it was of no advantage to employment. In Table XXV, p. 203, it is shown that 4 (17.4%) of the 23 industrial sewing graduates considered competency A1 to be essential; 14 (60.9%) of the graduates found it to be of some advantage; and 5 (21.7%) thought the competency was of no advantage to employment.

Table XXVI, p. 207, indicates that 4 (100%) garment manufacturers considered identifying color shades as essential to employment. Table XXVII, p. 210, indicates that 3 (25%) of the 12 graduates employed in garment manufacturing considered identifying color shades as essential to employment. Eight graduates (67%) thought the competency was of some advantage; one (8%) thought it was of no advantage to employment.

In Table XXVIII, p. 213, it is shown that 2 (100%) of the shoe manufacturers found competency A1, "identify color shades," essential to employment. Table XXIX, p. 216, indicates that no graduates employed in shoe manufacturing considered competency A1 as essential. Two (33%) of the 6 graduates thought it was of some advantage; four (67%) found it to be of no advantage to employment.

Table XXX, p. 219, shows that one (50%) of the 2 toy manufacturers considered identifying color shades to be essential to employment, and one (50%) found the competency to be of some advantage. Table XXXI, p. 222, indicates that one (20%) of the 5 graduates employed in toy manufacturing considered identifying color shades to be essential to employment; four (80%) graduates found it to be of some advantage.

Alteration Specialist Entry-Level Competencies

Only one employer, one teacher, and two students comprised the alteration specialist group for the study. Because the group was so small, no statistical analysis was done, but a frequency count of responses was noted.

The teacher consistently rated nearly all competencies as essential for entry-level employment. The employer also rated most competencies as essential, and the rest as of some advantage, except for competency #21, that the entry-level employee should be able to handle customer complaints; and competency #22, that the employee should be able to do routine office work, which he rated as no advantage to employment.

The graduates rated several competencies as being of no advantage to employment. These included competencies #5, 6, 7, 10, 11, 15, 20, and 21 under Working Competencies. All four participants agreed that competency #13, using a conventional sewing machine; and competency #14, selecting and using equipment and tools needed for work, were both essential. Competency #3, measuring accurately; competency #9, replacing different types of garment fasteners; and competency #19, organizing an efficient work space, were agreed to as essential by 3 of the 4 participants. Under Working Competencies, the teacher suggested that the entry-level employee should also be able to hem garments professionally, shorten men's sleeves, and take in extra fullness in garments.

In the area of Related Knowledge, all four agreed that competency #5, the entry-level employee should recognize good quality work, was essential. There was agreement on eleven of the fifteen competencies

concerning Personal Work Habits and Attitudes with all eleven being considered essential. There was also agreement on competency #1, regarding a General Knowledge of the World of Work in knowing how to apply and interview for a job, as being essential. See Table XII.

TABLE XII

DEGREE OF IMPORTANCE GIVEN TO ALTERATION SPECIALIST ENTRY-LEVEL COMPETENCIES BY FREQUENCY OF RESPONSE OF EMPLOYERS, TEACHERS, AND GRADUATES

Entry-Level Competencies	Degree of Importance* 1	2	3
A. Working Competencies			
The entry-level employee should be able to:			
1. fit garment on customer.	2	2	
2. analyze fitting problems.	2	2	
3. measure accurately.	3	1	
4. mark garment for desired alterations.	1	3	
5. write notes indicating alterations and instructions.	1	1	2
6. estimate cost of work and time for completion.	1	2	1
7. repair knitted and woven fabric.	2	1	1
8. do a variety of alterations on a variety of garments.	2	2	
9. replace different types of garment fasteners	3	1	
10. replace linings.		3	1
11. repair imperfect work.	2	1	1
12. use proper pressing techniques for fabric and garment design	2	2	
13. use conventional type sewing machine.	4		
14. select and use equipment and tools needed for work.	4		
15. recognize machine problems.	1	1	2
16. do minor machine repair, replace needles, clean and oil, etc.	1	3	
17. adjust machine, stitching, etc.	2	2	
18. read instruction manuals.	1	3	
19. organize an efficient work area.	3	1	
20. prepare customer's claim ticket.		3	1
21. handle customer complaints.	1		3
22. do routine office work.	1	2	1
23. use industrial sewing machine.	2	2	

TABLE XII (Continued)

Entry-Level Competencies	Degree of Importance* 1	2	3
B. Related Knowledge The entry-level employee should:			
1. understand terminology specific to the alteration industry.	3	1	
2. have a working knowledge of fabrics.	2	2	
3. have a working knowledge of threads.	2	2	
4. understand marking procedures.	1	3	
5. recognize good quality work, seams, etc.	4		
C. Personal Work Habits and Attitudes The entry-level employee should:			
1. be able to do good quality work.	4		
2. be able to do a specified quantity of work.	3	1	
3. cooperate with fellow workers.	4		
4. accept supervision.	4		
5. listen to and follow instructions.	3	1	
6. be dependable.	4		
7. have regular attendance.	4		
8. have initiative.	4		
9. be prompt.	4		
10. have an acceptable personal appearance.	4		
11. adapt quickly to new situations.	4		
12. be able to discuss work related problems with supervisor.	1	3	
13. apply proper safety procedures in work situation.	3	1	
14. be willing to do routine work.	4		
15. be able to work under pressure.	3		1
D. General Knowledge of the World of Work The entry-level employee should:			
1. know how to apply and interview for a job.	4		
2. understand labor union membership.	1	3	
3. know how to discuss wages.	1	3	
4. understand employee benefits.	3	1	
5. understand problems of industry or company management.	2	2	

*1 - Essential to employment; 2 - Some advantage to employment; 3 - No advantage to employment.

Laundry and Dry Cleaning Entry-Level Competencies

Only two respondents, one employer and one teacher, represented laundering and dry cleaning in the study. Both were in agreement on almost all competencies and considered most of them essential. Competencies #11 and 12 were considered of some advantage by the teacher and of no advantage by the employer. Competency #11, making minor repairs on garments; and competency #12, reweaving or repairing holes in woven or knitted fabrics, were explained by the employer to be tasks of a seamstress or an alterationist rather than a person trained in laundering and dry cleaning. Both the employer and teacher agreed that competencies #19, 20, 21, 22, and 23 were of no advantage to employment. These concerned handling customer complaints; doing routine office work; ordering and stocking new supplies; ordering new equipment; and organizing efficient work space. All the competencies listed under Related Knowledge and Personal Work Habits and Attitudes were considered essential by the two participants. Concerning a General Knowledge of the World of Work, they agreed that it was essential for the entry-level employee to know how to apply and interview for a job and it is of some advantage for him to know how to discuss wages. They were divided on the other competencies, but checked them as essential or of some advantage. See Table XIII.

TABLE XIII

DEGREE OF IMPORTANCE GIVEN TO LAUNDERING AND DRY CLEANING ENTRY-LEVEL COMPETENCIES BY FREQUENCY OF RESPONSE OF AN EMPLOYER AND TEACHER

Entry-Level Competencies	Degree of Importance* 1	2	3
A. Working Competencies The entry-level employee should be able to:			
1. separate garments according to color and fiber content.	2		
2. separate garments with spots and stains.	2		
3. identify spots and stains.	2		
4. use correct spot and stain removal procedures.	2		
5. operate dry cleaning machine or washing machine properly for fiber content and garment type.	2		
6. operate solvent extracting machine.	2		
7. operate solvent distilling equipment.	2		
8. apply proper drying procedures for various garments and fabric.	2		
9. determine proper use of fabric softeners, starch, solvents, dyes, chemical reagents, etc.	2		
10. analyze needed garment repairs.	2		
11. make minor repairs on garments.		1	1
12. reweave or repair holes in woven or knitted fabrics.		1	1
13. operate ironing and pressing equipment.	2		
14. select correct ironing temperatures and procedures for garment style and fabric.	2		
15. inspect finished garment.	2		
16. hang or fold garments after cleaning and finishing.	2		
17. prepare customer's claim ticket.	1	1	
18. compare customer's garments with original invoice.	2		
19. handle customer complaints.			2
20. do routine office work.			2
21. order and stock new supplies, detergents, solvents, etc.			2
22. order new equipment.			2
23. organize efficient work space.			2
24. do minor routine maintenance work on equipment.		1	1

TABLE XIII (Continued)

Entry-Level Competencies	Degree of Importance* 1	2	3
B. Related Knowledge			
The entry-level employee should:			
1. understand terminology specific to the dry cleaning and laundering industry.	2		
2. have a working knowledge of fabrics.	2		
3. have a knowledge of chemical reactions of cleaning fluids, spot removers, etc. on specific fabrics.	2		
4. recognize good quality work in pressing and repair of garments.	2		
5. have a knowledge of the effect of temperature on specific fabrics.	2		
C. Personal Work Habits and Attitudes			
The entry-level employee should:			
1. be able to do good quality work.	2		
2. be able to do a specified quantity of work.	2		
3. cooperate with fellow workers.	2		
4. accept supervision.	2		
5. listen to and follow instructions.	2		
6. be dependable.	2		
7. have regular attendance.	2		
8. have initiative.	2		
9. be prompt.	2		
10. have an acceptable personal appearance.	2		
11. adapt quickly to new situations.	2		
12. be able to discuss work related problems with supervisor.	2		
13. apply proper safety procedures in work situation.	2		
14. be willing to do routine work.	2		
15. be able to work under pressure.	2		
D. General Knowledge of the World of Work			
The entry-level employee should:			
1. know how to apply and interview for a job.	2		
2. understand labor union membership.	1	1	
3. know how to discuss wages.		2	
4. understand employee benefits.	1	1	
5. understand problems of industry or company management.	1	1	

*1 - Essential to employment; 2 - Some advantage to employment; 3 - No advantage to employment.

Ratings of Occupational Programs

When asked to rate the preparation of the graduates of occupational clothing programs for entry-level jobs, four (50%) of the eight industrial sewing employers rated the graduates' preparation as "good". Four (50%) rated the graduates' preparation as "fair". The laundering and dry cleaning employer and alteration specialist employer rated the graduates' preparation as "good".

The nine teachers were asked to rate the preparation of the graduates of occupational clothing programs in their schools. Two (28.6%) of the industrial sewing teachers rated the preparation of their graduates as "excellent"; five (71.4%) of the industrial sewing teachers rated the graduates' preparation as "good"; one teacher who prepared graduates as alteration specialists rated their preparation as "excellent"; and one laundering and dry cleaning teacher rated the preparation of his graduates as "excellent".

When twenty-five graduates rated their training in preparing them for employment in an entry-level clothing related occupation, two (9%) industrial sewing graduates rated their training as "excellent"; sixteen (70%) industrial sewing graduates rated theirs as "good"; four (17%) industrial sewing graduates rated their training as "fair"; and one (4%) rated her training as "poor". One (50%) of the alteration specialist graduates rated her training as "good"; the other one (50%) rated her training as "fair". No response was received from a graduate of a laundering and dry cleaning program.

In observing the ratings given by all three groups of participants (employers, teachers, graduates) and listing the responses according to the three occupations represented (industrial sewing, laundering and

dry cleaning, alterationists), it was discovered that the teachers tended to rate the preparation of graduates for entry level jobs higher than did the employers and graduates. See Table XIV.

TABLE XIV

RATING OF PREPARATION OF GRADUATES FOR ENTRY-LEVEL JOBS
BY EMPLOYERS, TEACHERS, AND GRADUATES

	Employers						Teachers						Graduates					
	Ind.		Sew.*	Alt.**		L.&D.C.***	Ind.		Sew.*	Alt.**		L.&D.C.***	Ind.		Sew.*	Alt.**		L.&D.C.***
Ratings	N=8		%	N=1	%	N=1 %	N=7		%	N=1	%	N=1 %	N=23		%	N=2	%	N=0 %
Excellent							2		28.6	1	100	1 100	2		9			
Good	4		50	1	100	1 100	5		71.4				16		70	1	50	
Fair	4		50										4		17	1	50	
Poor													1		4			

*Industrial Sewing

**Alteration Specialists

***Laundry and Dry Cleaning

Suggestions for Improvement of Student Training

All three groups of participants (employers, teachers, graduates) were asked to give specific suggestions for improving the training and preparation of students in occupational programs. Several of the statements from the three groups were similar. For instance, the employers suggested that the students should be given a better knowledge of industry and more exposure to actual operations by means of field trips and tours prior to graduation. In the same area, the teachers suggested in-service training in a manufacturing company on a cooperative education plan. The graduates suggested similar ideas such as on-the-job training; observing different jobs to see what they are like; visiting factories and seeing how different machines are operated. The employers were particularly interested in seeing the graduates develop a good attitude toward work and understand how industry must operate in a productive atmosphere.

Teachers expressed concern that one occupational clothing class was not enough. One suggested at least two prerequisite courses. They suggested the need for a variety of sewing experiences and the graduates verified this with similar statements regarding the need to learn about more types of machines, more construction techniques, and a variety of types of fabrics.

Graduates expressed an interest in having teachers who were well prepared and knowledgeable to teach the occupational clothing courses and did not want the occupational courses to be combined with regular clothing construction classes. Several indicated a need to learn more about the power sewing machine, its use and care. Some graduates also

expressed concern that students need to accept more responsibility for their own learning. The opinion was voiced that if the student is really interested in learning, he will listen and learn. See Table XV.

TABLE XV

SUGGESTIONS GIVEN BY EMPLOYERS, TEACHERS, AND GRADUATES FOR IMPROVING THE TRAINING AND PREPARATION OF STUDENTS IN OCCUPATIONAL CLOTHING PROGRAMS

Item No.	Suggestions	Number of Responses by Emp.*	Tea.**	Grad.***
1.	Training should apply to jobs available.	1		2
2.	Teach how to apply for work.	1		
3.	Teach facts of employer, employee, stockholder relationship.	1		
4.	Give student more exposure to actual operation of industry.	2		2
5.	Provide on-the-job training in manufacturing.		1	2
6.	Pay students more for their work.			1
7.	Emphasize a good attitude toward work.	1		
8.	Teach incentive rate system - teamwork approach.	1		
9.	Use practical application in teaching.	1		
10.	Emphasize quality rather than quantity.			1
11.	Two years of Industrial Sewing courses are needed instead of one.		2	
12.	Tailoring should be offered.			1
13.	Give a varied program of sewing activities and new construction techniques.		1	3
14.	Teach speed-stitching.			1
15.	Teach a piece work system.			1
16.	Emphasize use and care of power machines.			5
17.	More experience is needed with a variety of fabrics, including leathers.			4
18.	Employ well qualified teachers.			2
19.	Use a good advisory committee in planning.		1	
20.	Have well-equipped rooms with all facilities.		1	
21.	Motivate low ability students.		1	
22.	Students need to accept more responsibility for their own learning.			2

*Employers

**Teachers

***Graduates

Some participants gave more than one response; others gave none. The numbers only indicate the number of times the response was given.

Description of Teachers

Nine occupational clothing teachers responded to questionnaires. Eight were teaching occupational sewing courses and one taught laundering and dry cleaning.

Educational Background

Of the nine teachers responding to questionnaires, six had no college degree; one had a Bachelor's degree in general home economics; and two had Master's degrees in vocational home economics. One person with a Master's degree had earned 3 hours beyond her degree. The person with a Bachelor's degree had earned 10 hours beyond her degree. The researcher did not ask for the number of college credit hours earned by those who did not have academic degrees, but one teacher who held a two-year temporary certificate volunteered the information that she had taken 20 hours of vocational home economics. Another stated that she had two years of college education. All nine teachers had taken at least some college training as indicated by another questionnaire item that referred to courses which they had taken in order to teach occupational clothing.

Teacher Certification

The two teachers with Master's degrees held lifetime certification in vocational home economics. The teacher with the Bachelor's degree held lifetime certification in general home economics education with occupational certification in vocational clothing. One teacher without a college degree, but two years of college credit, reported that she had a five-year temporary occupational certificate. Five teachers

reported that they held two-year temporary occupational certification. One of these had earned 20 hours of credit in vocational home economics. Certification of vocational, occupational, and general home economics teachers in Missouri was explained in detail on page 40.

Professional Courses

The nine teachers participating in the study were asked to list the courses which they had taken to prepare for teaching occupational clothing. In the area of professional education, a course entitled Occupational Analysis was listed by five teachers. Another course called Selection and Organization of Subject Matter was listed by four teachers; Assessment and Evaluation in Vocational Education was listed by three; Philosophy of Vocational Education and Principles of Teaching Vocational Subjects were two courses each noted by two teachers. Other professional education courses, each listed once, were: Occupational Home Economics, Foundations of Adult Education, Problems in Vocational Education, Principles of Trade and Industrial Teaching, Coordination of Cooperative Education, Principles of Guidance, Problems in Industrial Education, Audio-Visual Aids, and SCM-MOD Behavior Patterns. Professional clothing and textiles related courses reported by the teachers included Tailoring, which was listed three times; Clothing Construction and Advanced Clothing, each listed twice; and Sewing Lingerie, Sewing Men's Knits, Children's Clothing, Clothing Theory, Draping, Textiles, Costume Design, and Upholstering which were each listed once. A course in English was also listed by one teacher. All of the courses had been taken on the undergraduate level with the exception of three. Those were Occupational Home Economics, Clothing Theory, and Draping. See Table XVI.

TABLE XVI

PROFESSIONAL COURSES TAKEN BY TEACHERS TO PREPARE FOR TEACHING OCCUPATIONAL CLOTHING

Course Titles	Number of Teachers**
Professional Education Courses:	
Occupational Analysis	5
Selection and Organization of Subject Matter	4
Assessment and Evaluation in Vocational Education	3
Philosophy of Vocational Education	2
Principles of Teaching Vocational Subjects	2
Occupational Home Economics*	1
Foundations of Adult Education	1
Problems in Vocational Education	1
Principles of Trade and Industrial Teaching	1
Coordination of Cooperative Education	1
Principles of Guidance	1
Problems in Industrial Education	1
Audio-Visual Aids	1
SCM-MOD Behavior Patterns	1
Professional Clothing and Textiles Courses:	
Tailoring	3
Clothing Construction	2
Advanced Clothing	2
Sewing Lingerie	1
Sewing Men's Knits	1
Children's Clothing	1
Clothing Theory*	1
Draping*	1
Textiles	1
Costume Design	1
Upholstering	1
Other Courses:	
English	1

*Graduate level courses

**Number of teachers reporting that they had taken the courses

Work Experience in Clothing Related Occupations

The certification requirements for secondary occupational home economics teachers in Missouri are given on pages 40 and 41. For a five-year certificate, a teacher must have a Bachelor's degree in the appropriate field and 2,000 clock hours of work experience in the area of instruction. A person with less than a Bachelor's degree may be employed to teach occupational home economics courses other than child care. However, the candidate must demonstrate knowledge and skill of the job and have a minimum of 3,000 clock hours of work experience and 18 hours of professional education.

Two-year certificates are granted to candidates with less than the required educational hours or work experience. The minimum amount of work experience for temporary certification is 1,000 clock hours.

The nine teachers were asked to give the job titles, length of time employed, and approximate number of hours worked per week in clothing related occupations other than teaching in which they had been employed. Five of the nine teachers had work experience as sewing machine operators. Two teachers reported having worked as alterationists; two had been machine instructors; and two had done custom sewing. One each reported having worked as a floor lady, repair girl, in fashion display, in laundry-mending, in upholstering, and as a cleaner and presser. All of the teachers had worked at more than one kind of job during their work experience. One had also worked as a waitress; another had worked as a stenographer in addition to clothing related occupations; and a third had not had work experience directly related to clothing, but had worked as a home adviser and as a home economist in business.

The total hours of clothing related work experience by individual teachers ranged from 31,520 hours for the teacher with the most clock hours of job experience down to 240 hours by another teacher with the least clothing related on-the-job experience. Six of the teachers each had 15,000 hours or more of clothing related work experience; one had 1,200 hours; one had 240 hours; and one had no clothing related work experience. The latter teacher had worked as a home adviser and home economist in business for a total of 2 years and 2 months at 40 hours per week for a total of 4,480 work hours. The person who reported 240 hours of clothing related work experience had also worked 18 weeks as a waitress at 20 hours per week or 360 additional work hours. The teacher who reported 1,200 work hours in clothing related occupations had also worked as a stenographer for 3 years at 20 hours per week or an additional 3,120 hours of work experience.

In comparing the work experience reported by the nine teachers with that required for certification in Missouri as given on page 40, two teachers lacked the minimum of 1,000 clock hours of clothing related work experience required for temporary certification. Six of the teachers had far more than the minimum clock hours of work experience required for occupational clothing certification. One teacher who reported 1,200 work hours had the minimum amount of work experience for temporary certification. One teacher who reported 240 hours of clothing related work experience had worked 360 hours as a waitress for a total of 600 occupational work hours which is less than the minimum of 1,000 clock hours that is required for temporary certification. The teacher who reported no clothing related work experience had 4,480 work hours in other occupational experience related to home economics, but not directly related to clothing. See Table XVII.

TABLE XVII

WORK EXPERIENCE OF TEACHERS IN CLOTHING RELATED OCCUPATIONS OTHER THAN TEACHING

Teacher	Job Title	Length of Time Employed Yrs.	Mos.	Wks.	No of Hrs. Per Week	Approx. Total Hrs. Each Job	Approx. Total Hrs. Ea. Tchr.
1.	Custom Sewing	15			20	15,600	19,760
	Upholstering	4			20	4,160	
2.*	Sewing Machine Operator			6	40	240	240
3.*	Fashion Display		6		20	480	1,200
	Alterationist		6		20	480	
	Laundry-Mending		3		20	240	
4.	Sewing Machine Operator	2			48	4,992	15,392
	Repair Girl	1			40+	2,080+	
	Factory Inspector	4			40+	8,320+	
5.	Sewing Machine Operator	15			40+	31,200+	31,520
	Floor Lady		2		40	320	
6.	Sewing Machine Operator	7			40	14,560	18,720
	Machine Instructor	2			40	4,160	
7.	Power Machine Operator	2	4		40	4,800	15,840
	Alterationist	2	4		40	4,800	
	Custom Sewing	3			40	6,280	
8.*	No Clothing Related Work Experience						-0-
9.	Cleaner and Presser	8			40	16,640	16,640

*These teachers had other business or industry related work experience which was not in the clothing field.

Teaching Experience

The nine teachers in the study represented a wide variety of teaching experience. One teacher reported having taught occupational courses for 10 years; two reported 6 years of experience; five reported 3 years of occupational teaching; and one reported 2 years of experience. One teacher (#3) reported having taught general homemaking courses on the junior high and secondary levels for 9 years; another (#8) reported 15 years of experience in teaching general and other homemaking courses in grades 9 through 12. One (#2) reported teaching vocational home economics in grades 9 through 12 for 10 years. Two teachers indicated community teaching experience in instructing adults. One of these (#7) had taught beginning and advanced sewing classes for 4 months; the other (#1) had taught beginning sewing, advanced sewing, tailoring, and sewing men's knits over a period of 10 years. Only two teachers reported teaching experience other than home economics or occupational. One (#2) reported having taught academic subjects in grades 3, 4, and 5 for a period of 4 years and high school civics for one year. The other (#8) reported teaching a community evening class in tailoring for adults over a period of 3 years. See Table XVIII.

TABLE XVIII

TEACHING EXPERIENCE IN HOME ECONOMICS AND/OR OCCUPATIONAL PROGRAMS REPORTED BY TEACHERS

Teacher	Type of Program	Grade Level	Courses Taught	No. of Years	No. of Months
1.	Occupational	11-12	Occupational Sewing	6	
	Community	Adult	Beginning Sewing, Advanced Sewing, Tailoring, and Sewing Men's Knits	10	
2.	Vocational Homemaking	9-12	Vocational Home Economics	10	
	Occupational	11-12	Vocational Sewing and Food Service	10	
3.	Occupational	11-12	Clothing Assistant and Housekeeping	3	
	General Homemaking	7-8	General Home Economics	2	
	General Homemaking	12	Personal Development	3	
	General Homemaking	12	Interior Decoration	3	
	General Homemaking	12	Bachelor Living and Family Meals	1	
4.	Occupational	12	Industrial Sewing	3	
5.	Occupational	11-12	Industrial Sewing	3	
6.	Occupational	12	Industrial Sewing	6	
7.	Occupational	11-12	Commercial Sewing	2	
	Community	Adult	Beginning Sewing and Advanced Sewing		4
8.	Homemaking	9-10	General Home Economics	5	
	Homemaking	9-12	Clothing For Moderns	4	
	Homemaking	11-12	Creative Clothing	3	
	Homemaking	10-12	Home Nursing	3	
	Occupational	11-12	Occupational Clothing	3	
9.	Occupational	11-12	Laundering and Dry Cleaning	3	

Courses Taught by Occupational Clothing Teachers

When asked to give the titles of courses which they were currently teaching in occupational clothing, three of the nine teachers listed Industrial Sewing. One each gave Occupational Clothing, Vocational Sewing, Clothing Assistant, Laundering and Dry Cleaning, and Commercial Sewing as titles of courses that they were teaching. One teacher listed eight courses which she had taught. They were: Selection, Care, and Use of Equipment; Study of Fabrics; Study of Basic Construction Techniques; Sewing With Plaids; Tailoring; Upholstery and Drapery Making; Sewing for the Public and Alteration of Men's and Women's Clothing; and Study of Business Aspects Pertaining to the Clothing Industry. See Table XIX.

TABLE XIX

TITLES OF OCCUPATIONAL CLOTHING COURSES CURRENTLY TAUGHT BY NINE CLOTHING TEACHERS IN MISSOURI

**1.	Industrial Sewing
2.	Occupational Clothing
3.	Vocational Sewing
4.	Clothing Assistant
5.	Laundry and Dry Cleaning
6.	Commercial Sewing
*7.	Selection, Care, and Use of Equipment
*8.	Study of Fabrics
*9.	Study of Basic Construction Techniques
*10.	Sewing With Plaids
*11.	Tailoring
*12.	Upholstery and Drapery Making
*13.	Sewing for the Public and Alteration of Men's and Women's Clothing
*14.	Study of Business Aspects Pertaining to the Clothing Industry

*One teacher listed items 7 through 14 as courses which she had taught.

**Three teachers listed Industrial Sewing as a course which they taught.

Three teachers reported that they teach other home economics courses in addition to occupational clothing. One reported that she also teaches Consumer Education and Food Service; another listed Bachelor Living, Family Meals, and Personal Development; a third indicated that she also taught Clothing for Moderns and Advanced Clothing (Tailoring).

Types of Schools

Five of the nine teachers stated that they are currently teaching in an area vocational-technical school. None of the five taught courses other than occupational clothing courses. Two of the teachers are teaching in a traditional high school, and two are teaching in a combination traditional high school and area vocational-technical school. Three of the teachers in the last two categories teach courses other than occupational clothing during the school day.

Educational Opportunities

A varied response was received when the teachers were asked to list educational opportunities, including readings, which had helped them learn more about occupational programs. Four of the nine teachers in the study listed professional journals such as the AVA Journal and the Illinois Teacher and other publications which included "Clothing Assistant," published by the Missouri Home Economics Instructional Materials Center; "Outline for a Preparatory Course in Occupational Home Economics in the Field of Clothing, Textiles, and Home Furnishings Services," published by the State Department of Education, Montgomery, Alabama; "Clothing Maintenance Specialist," from the Superintendent of

Documents, Washington, D. C.; and "Orientation to the World of Work," from the University of Missouri, Columbia. Professional clothing literature included the Vogue Sewing Magazine, and McCall's, Simplicity, and Butterick Sewing Books. Publications of the International Fabricare Institute, American Institute of Laundering and the National Institute of Dry Cleaning were listed by the teacher who taught laundering and dry cleaning.

Organizations and meetings which were observed by the four teachers as being beneficial included the experience of one teacher who had served on the State Satellite Committee for Occupational Curriculum and another who listed the meeting of the Home Economics Section at a Missouri Vocational Association Conference. A guest speaker from the Arkansas Occupational Program was noted as being very informative at one Missouri State meeting. Workshops which were listed as being worthwhile included a Home Economics Workshop in Des Moines, Iowa; and Occupational Education Workshop; and a Fashion Analysis Workshop in which participants toured many types of manufacturing. See Table XX.

TABLE XX

EDUCATIONAL OPPORTUNITIES WHICH HELPED TEACHERS LEARN ABOUT OCCUPATIONAL PROGRAMS

Publications:

AVA Journals
Illinois Teacher
"Clothing Assistant," Missouri Home Economics Instructional Materials Center.
"Outline for a Preparatory Course in Occupational Home Economics in the Field of Clothing, Textiles and Home Furnishings Services," State Department of Education, Montgomery, Alabama.
"Clothing Maintenace Specialist," Superintendent of Documents, Washington, D. C.
"Orientation to the World of Work," University of Missouri, Columbia.
Vogue Sewing Magazine
McCall's, Simplicity, Butterick Sewing Books
Publications of the International Fabricare Institute, American Institute of Laundering and the National Institute of Dry Cleaning

Organizations and Meetings:

State Satellite Committee for Occupational Curriculum
Home Economics Section of MVA Conference

Speakers:

Guest speaker from Arkansas Occupational Program

Workshops:

Home Economics Workshop in Des Moines, Iowa
Occupational Education Workshop
Fashion Analysis Workshop - toured many types of manufacturing

Suggestions for Improvement of Teacher Education

The nine teachers who responded to questionnaires were asked to give suggestions for improvement of the education of teachers who will teach in occupational clothing programs. Six of the teachers gave suggestions which included a summer workshop devoted to occupational teaching; use of employers' suggestions about areas in which teachers should be trained; a good background in clothing construction, textiles, alterations, tailoring, pattern drafting, and the world of work; and more on-the-job occupational experience. One suggested that teachers could profit from in-service training or a cooperative education plan such as that organized for some students. Employers were not asked about teacher training, specifically, but two volunteered information. One stated that teachers need to spend more time in industry so they will understand what needs to be taught. Another suggested that the Federal government subsidize on-the-job experience for prospective teachers who are training for occupational teaching to reimburse employers for hiring the teachers so they may gain work experience. See Table XXI.

TABLE XXI

SUGGESTIONS GIVEN BY TEACHERS FOR IMPROVING THE TRAINING AND PREPARATION OF TEACHERS FOR OCCUPATIONAL CLOTHING PROGRAMS

Response Number	Suggestions	No. of Teachers* Giving Response
1.	A good summer workshop really developed and devoted to occupational programs is needed.	1
2.	Use employers' suggestions of what is needed today to meet the labor market in training teachers.	1
3.	A background in clothing construction, textiles, alterations, tailoring, pattern drafting, and the world of work is needed.	1
4.	Up-to-date, on-the-job work experience, in-service training, or cooperative education, such as students have, would benefit teachers.	4
5.	Training in doing couture finishes is necessary if teaching alterations.	1
6.	Up-to-date information on operating latest power machines used in industry is needed.	1

*Responses were given by six of the nine teachers in the study. Some teachers gave more than one suggestion.

Summary

The results of interviews with ten employers and the responses from nine teachers and twenty-five graduates of occupational clothing programs were analyzed to ascertain the reactions of the three groups to the graduates' training for entry-level employment. Background information provided by teachers and graduates was used to describe their training, education related to occupational clothing careers, and work experience.

Twenty-six entry-level job titles were listed by employers as being available to occupational clothing graduates. Cost of training beginning employees was estimated by employers as $300 to $2,000. However, employers stated that good occupational training could make a difference of $500 to $600 in the cost of training beginning employees. Advancement opportunities were said to be good with the possibility of the employee obtaining any job in production and moving up to management if he or she had the ability and initiative. Occupational trainees were not hired at a higher wage than other beginning employees, but could advance quickly if they had experienced good training.

All the twenty-five graduate respondents were female. Twenty had been employed as sewing machine operators; two were Fancy Stitchers; one was a Binder; and two had worked as alterationists. Ten graduates had acquired clothing related jobs after graduation and were still working at those jobs. Fifteen of the twenty-five graduates had been employed in clothing related jobs, but were not working in the positions at the time of the research.

Only two graduates reported having any on-the-job occupational experience in clothing related occupations outside the classroom while

they were in high school. Eighteen of the twenty-five graduates replied that they had needed more on-the-job experience before completing the occupational training programs.

Chi square was used to test the null hypotheses which were stated for the study regarding entry-level competencies required for occupational clothing employees. Of fifty competencies, eighteen (36%) were found to have significant differences in responses at, or beyond, the .05 level of significance which had been specified when developing the hypotheses. The three groups (employers, teachers, graduates) differed more on the importance of competencies concerning Working Competencies than they did on the other three sections of the entry-level competency checklist. Those sections were Related Knowledge, Personal Work Habits and Attitudes, and a General Knowledge of the World of Work. The teachers tended to rate more competencies as being essential than did the employers and graduates.

The teachers tended to rate the training of occupational graduates higher than did the employers or graduates. Suggestions were given by the three groups of participants for improvement of secondary occupational clothing training programs. Some statements were similar. For instance, employers suggested more exposure of the students to actual industrial operations; teachers suggested in-service training in manufacturing for the students; and the graduates favored on-the-job training as a method of improving programs.

Six of the nine teachers responding had a vast amount of work experience in occupational clothing and all nine showed indication of continued professional improvement in the professional education courses which they had taken. Three of the teachers had college degrees and

held lifetime certification for teaching home economics. Six teachers had no college degree and held temporary certification for teaching occupational clothing. The teachers listed summer workshops devoted to occupational programs; employers' suggestions for learning experiences; a comprehensive background in textiles and clothing construction; and up-to-date, on-the-job work experience among suggestions for improving the training and preparation of teachers for occupational clothing programs.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary

The popularity of occupational programs within the last ten years and the legislation supporting them have created a demand for teachers trained in specific occupational areas and for a curriculum designed to meet the needs of students. A number of follow-up studies have been done and are in progress to determine more precisely what the students need to prepare them for entry-level jobs. The studies also aid in justifying the expenditure of funds for the programs.

The problem of this research was to identify some of the entry-level competencies which are needed by graduates who are entering clothing related occupations from secondary occupational programs in high schools and area vocational schools. In addition, some background information was requested from employers, teachers and graduates in an attempt to get an overall picture of the occupational clothing programs in Missouri and the employers who are receiving the products of the programs.

The objectives of the study were: (1) to determine the entry-level clothing careers which students were entering, or could enter, upon completion of secondary occupational programs in high schools or area vocational schools in Missouri, (2) to determine the entry-level

competencies and the degree of importance of each competency in performing tasks required in the clothing related occupations, and (3) to suggest improvements for high school occupational clothing program curricula and for preparation of teachers who will teach textiles and clothing related courses in occupational programs.

The entire population of 1972 and 1973 graduates of occupational clothing programs in Missouri who had obtained clothing related employment upon graduation was asked to participate in the study. The graduates' employers and occupational clothing teachers were also subjects of the research. The population, as defined above, consisted of fourteen employers, ten teachers, and thirty-four graduates.

Forty-four people participated in the study. Ten were employers; nine were teachers; and twenty-five were graduates of 1972 and 1973 occupational clothing programs. A 71 percent response was received from employers who were asked to participate in an interview. Ninety percent of the teachers and 73.5 percent of the graduates responded to mailed questionnaires.

In addition to requests for other information, the interview forms and questionnaires contained a list of entry-level competencies to which the participants were asked to respond as to whether the competencies were essential, some advantage, or no advantage to entry-level employment. A statistical analysis was done with the entry-level competency data to compare the responses of employers, teachers and graduates. A frequency count was made and a percentage response computed for each competency listed. Chi square was used to test the relationship of the answers given by the three groups. A significance level of .05 had been determined when the hypotheses were stated. Of fifty competencies,

eighteen (36%) were found to have significant differences in responses at, or beyond, the .05 level of significance.

Background information provided by teachers and graduates was tabulated and used to describe their training, education related to clothing careers, and work experience. The research participants were asked to give suggestions for improving the occupational training of students seeking clothing related occupations. The teachers were also asked to give suggestions for improving the training of teachers who will implement the program. All groups gave numerous helpful suggestions.

Conclusions

The conclusions are organized according to the objectives of the study as they were stated on page 2 and restated in the summary on page 108.

Objective 1: Entry-Level Jobs Entered by Graduates

Entry-level jobs were available to graduates of occupational clothing programs in Missouri as indicated by the twenty-six job titles provided by employers in the study. The twenty-five graduates reported having worked at a total of five entry-level jobs with twenty (80%) reporting having been employed as sewing machine operators.

Employers indicated that secondary level occupational training could make a difference of about half of the time usually required to train an inexperienced employee, or from $500 to $600 in the monetary value of the training. With good training, the graduate of an

occupational program could start on a job without further training and become productive immediately.

Employment advancement opportunities were good if the employee had efficient work habits, ability, and initiative. Employers stated that entry-level employees had the possibility of advancing to any job in the companies including supervision and management. Union contracts did not permit hiring occupational trainees at a higher wage, but employers reported that the graduate with good training could advance to a higher wage more quickly than the totally inexperienced employee.

Secondary level occupational clothing training programs can prepare students for entry-level clothing related occupations at which they can be successful as indicated by ten (40%) of the graduates who reported having acquired occupational clothing related jobs since graduation and were still working at those jobs at the time of the research. The fifteen (60%) who were no longer working at clothing related jobs left them because of marriage, health, lack of available work, temporary employment, college, not liking the work, and inadequate wages. Only one reported that her training was not adequate.

Objective 2: Entry-Level Competencies

Employers, teachers, and graduates could identify entry-level competencies needed to aid the graduate of occupational clothing programs in obtaining and holding a job. The three groups agreed on the degree of importance of thirty-two (64%) of fifty listed entry-level competencies. They generally considered competencies related to personal work habits and attitudes as essential to success in an entry-level job.

There was a difference of opinion among employers, teachers, and

graduates regarding the importance of some entry-level competencies as indicated by significant differences having been observed at the .05 level, or beyond, on responses to eighteen (36%) of the fifty listed competencies. Sixteen of these competencies were listed under Working Competencies or specific manual skills required for industry.

Teachers tended to rate more of the competencies as essential for employment than did employers and graduates. Of ten entry-level competencies showing significant differences in responses to degrees of importance for industrial sewing, eight were given significantly greater importance by teachers than by employers and graduates.

Objective 3: Suggestions for Improvement of Occupational Training

Teachers tended to rate the graduates' occupational training higher than did graduates and employers. The training was rated as excellent by 28.6 percent and good by 71.4 percent of the industrial sewing teachers. Fifty percent of the industrial sewing employers rated the graduates' training as good and fifty percent rated the training as fair. Nine percent of the industrial sewing graduates rated their training as excellent; seventy percent rated the training as good; seventeen percent rated it as fair; and four percent rated the training as poor.

Employers, teachers, and graduates all recommended more on-the-job experience before graduation for the students and also more up-to-date occupational experience for the teachers. Eighteen (72%) of the twenty-five graduates replied that they needed more on-the-job experience before graduation. The employers, teachers, and graduates also emphasized the

need for students to work with a greater variety of fabrics in their occupational clothing classes so they would be more familiar with the proper handling and care of them in the production of merchandise.

The majority (66%) of the nine teachers had excellent occupational work experience and all were continually updating their work through professional education courses. Three of the nine teachers held lifetime certification for teaching home economics in addition to occupational certification. Six held five-year or two-year certification for teaching occupational clothing. Six of the teachers each had 15,000 or more hours of clothing related work experience.

Implications

The implications are organized according to the objectives of the study as they are stated on page 2 and restated in the summary on page 108.

Objective 1: Entry-Level Jobs Entered by Graduates

Students need to be made more aware of entry-level jobs available to them and the responsibilities of the positions as indicated by twenty-six entry-level jobs having been reported as available by employers, but the graduates reported having worked in only five. The graduates and employers expressed a need for the students to learn more about the actual responsibilities of entry-level jobs before graduation.

Objective 2: Entry-Level Competencies

Continuous evaluation and follow-up studies can aid in the

development of more relevant occupational clothing programs at the secondary level. Feedback is needed from both the employers and graduates. Other research supports this implication as shown in the review of literature. In this research, teachers tended to give more importance to some competencies than did employers and graduates, which seems to indicate that feedback from employers and graduates could aid in deciding where the emphasis should be placed in the occupational clothing curriculum to make it more relevant to current occupational needs.

Attention should be given to the development of efficient, effective, and enjoyable personal work habits and attitudes during occupational training. All participants in the study rated these competencies as essential and emphasized the need for them.

Objective 3: Suggestions for Improvement of Occupational Training

More on-the-job experience or cooperative education needs to be provided for the student so that he or she may more fully understand the demands of an occupational clothing related career in industry. This need was voiced by participants in all three groups (employers, teachers, graduates) and was also indicated by those who reported having obtained an occupational clothing related job and then finding that they did not like that type of work.

More opportunities need to be made available to occupational clothing teachers for them to spend some time in industry frequently to keep abreast of what is needed for student training. Employers, teachers, and graduates expressed this need in the study. An employer suggested Federal reimbursement to cover the cost of such an endeavor.

More workshops and college level courses devoted specifically to teaching occupational clothing need to be made available to assist the occupational clothing teacher in developing curricula and instructing her/his classes. Teachers expressed this need when asked to give suggestions for improving teacher education in the occupational clothing area. Home economics administrators and others who plan home economics curricula for higher education could utilize the results of follow-up studies in planning courses to meet the needs of students who are seeking certification for teaching occupational clothing courses.

An expansion of follow-up studies to include several states and investigate the requirements for entry-level jobs in industries of various sizes could add to the overall knowledge of the needs of industry to be met by occupational clothing training on the secondary level. By using the results of such research to improve occupational clothing program curricula, educators could increase the employability of the occupational clothing trainee who moves from one state to another.

In all aspects of education, follow-up studies and evaluation can be an effective tool for improving the quality of curricula and the training of teachers who implement it. Such research is especially valuable to occupational training programs that are trying to develop qualities in individuals which will help them to be independent, self-supporting, and satisfied with life.

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APPENDIX A

CORRESPONDENCE FOR OBTAINING DATA

SOUTHWEST MISSOURI STATE UNIVERSITY • SPRINGFIELD, MISSOURI 65802 • (417) 831-1561

February, 1974

Letter to Administrators

Dear _____:

I need your help in conducting a research project concerning entry-level competencies in clothing related careers needed by graduates of secondary occupational programs and area vocational schools in Missouri. In implementing the research, I plan to interview employers of 1972 and 1973 graduates of occupational clothing programs who have been employed in clothing related occupations. I also plan to mail questionnaires to the graduates and their occupational clothing teachers. Will you please help by sending me the names and addresses of your 1972 and 1973 graduates and also the names and addresses of their employers?

The research is part of my doctoral study at Oklahoma State University and is being funded by a grant from the Missouri State Department of Education.

Thank you.

Sincerely,

Joyce Waldron
Assistant Professor
Home Economics Department

SOUTHWEST MISSOURI STATE UNIVERSITY • SPRINGFIELD, MISSOURI 65802 • (417) 831-1561

September, 1974

Letter to Employers

Dear _____:

I am a student at Oklahoma State University and a teacher at Southwest Missouri State University. I am doing research on occupational clothing programs as part of my work for a doctoral degree at OSU and also for information that is needed in Missouri to improve our high school occupational clothing courses. Will you please help me by consenting to an interview concerning the entry-level competencies which you expect graduates of secondary occupational programs and area vocational schools to have for beginning employment? Your responses to the interview will be kept completely confidential. No research participant will be identified in the research report.

Please complete the information on the enclosed postcard and return it to me within a week. After receiving the postcard, I will call you to finalize plans for an interview.

Thank you.

Sincerely,

Joyce Waldron
Assistant Professor
Home Economics Department

Postcard to Employers

Name of Business _____

Address _____

Name of individual to be interviewed _____

Business telephone number of person to be interviewed _____

Preference for interview meeting time: Morning _____
Afternoon _____
Date _____

SMS UNIVERSITY

SOUTHWEST MISSOURI STATE UNIVERSITY • SPRINGFIELD, MISSOURI 65802 • (417) 831-1561

September, 1974

Follow-Up Letter to Employers

Dear _____:

Within the last two weeks you received a letter from me requesting your participation in an interview for research to determine the entry-level competencies which you expect graduates of secondary occupational clothing programs in high schools and area vocational schools to have for beginning employment. If you have not returned the postcard which was enclosed giving information concerning a time for an interview, will you please do so within a week? I have enclosed a second postcard in case the first one has been misplaced.

Thank you for your cooperation.

Sincerely,

Joyce Waldron
Assistant Professor
Home Economics Department

SMS UNIVERSITY

SOUTHWEST MISSOURI STATE UNIVERSITY • SPRINGFIELD, MISSOURI 65802 • (417) 831-1561

February, 1975

Letters to Teachers

Dear _____:

I am a student at Oklahoma State University and a teacher at Southwest Missouri State University. Your help is needed with research on occupational clothing programs which I am doing as part of my work for a doctoral degree at OSU and also for information that is needed in Missouri to improve our high school occupational clothing courses. Will you help me by filling out the enclosed questionnaire and returning it in the enclosed, postage-paid envelope by February 14th? Your response will be kept completely confidential. No research respondent will be identified in the research report.

Thank you.

Sincerely,

Joyce Waldron
Assistant Professor
Home Economics Department

SOUTHWEST MISSOURI STATE UNIVERSITY • SPRINGFIELD, MISSOURI 65802 • (417) 831-1561

February, 1975

Follow-Up Letter to Teachers

Dear _____:

Within the last two weeks you received a letter and questionnaire from me requesting your participation in research which I am conducting regarding entry-level competencies needed by graduates of secondary occupational clothing programs in Missouri. If you have not returned the questionnaire, will you please do so within a week? I have enclosed another questionnaire and postage-paid envelope in case the first ones have been misplaced.

Thank you for your cooperation.

Sincerely,

Joyce Waldron
Assistant Professor
Home Economics Department

SOUTHWEST MISSOURI STATE UNIVERSITY • SPRINGFIELD, MISSOURI 65802 • (417) 831-1561

February, 1975

Letter to Graduates

Dear _____:

I am a student at Oklahoma State University and a teacher at Southwest Missouri State University. I am doing research on occupational clothing programs as part of my work for a doctoral degree at OSU and also for information that is needed in Missouri to improve our high school occupational clothing courses. Will you help me by filling out the enclosed questionnaire and returning it in the enclosed, postage-paid envelope by February 14th? Your response will be kept completely confidential. No research respondent will be identified in the research report.

The Missouri occupational programs are relatively new and I am asking 1972 and 1973 graduates who have been employed in some phase of occupational clothing to answer questions about their work experience and occupational classes. Please help. I will be most grateful and future students will benefit from your participation.

Thank you.

Sincerely,

Joyce Waldron
Assistant Professor
Home Economics Department

SOUTHWEST MISSOURI STATE UNIVERSITY • SPRINGFIELD, MISSOURI 65802 • (417) 831-1561

February, 1975

Follow-Up Letter to Graduates

Dear _____:

Within the last two weeks you received a letter and questionnaire from me requesting your participation in research which I am conducing regarding entry-level competencies needed by graduates of secondary occupational clothing programs in Missouri. If you have not returned the questionnaire, will you please do so within a week? I have enclosed another questionnaire and postage-paid envelope in case the first ones have been misplaced.

Thank you for your cooperation.

Sincerely,

Joyce Waldron
Assistant Professor
Home Economics Department

APPENDIX B

EMPLOYER INTERVIEW FORMS

INDUSTRIAL SEWING

EMPLOYER INTERVIEW

Name_____Title_____
(Employer or Supervisor)

Name of Company_____

Address of Company_____Telephone_____

In order to arrive at a common understanding among employers in answering the interview questions, the following definitions are used:

Entry-Level Competencies are the knowledge, skills, and judgment which a beginning employee demonstrates at a predetermined proficiency level when first obtaining a position.

Essential to Employment refers to competencies which the beginning employee is expected to have in order to be hired.

Some Advantage to Employment indicates that the competency would be helpful to employment, but is not necessary for the person to be hired.

No Advantage to Employment indicates that the competency is of no value to employment in the company.

1. What are the titles of jobs for which graduates of occupational clothing training programs in high schools or area vocational-technical schools have been employed, or could enter, in your company?

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

2. On the following pages are lists of possible entry-level competencies which employers may expect beginning employees who are graduates of occupational clothing programs in high schools or area vocational-technical schools to have when first becoming employed. To what degree are the following listed competencies important in the entry-level jobs for which you hire high school graduates from occupational clothing programs? Please check one of the columns for each item listed as the directions indicate.

Joyce Waldron
Teacher Educator
Department of Home Economics
Southwest Missouri State University
Springfield, Missouri 65802

Please check one of the columns for each item listed below. Under "other," write in any items which have not been included and which you consider essential or of some advantage to employment.

A. Working Competencies The entry-level employee should be able to:	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) identify color shades.			
(2) color shade bolts of cloth.			
(3) lay fabric by hand or with spreading machine.			
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.			
(5) cut individual garments by hand.			
(6) sort bundles of cut parts and tie them into bundles.			
(7) distribute bundles of garment parts and supplies to production workers.			
(8) mark location points on garment parts.			
(9) use conventional type sewing machine.			
(10) use a power machine.			
(11) organize work space and equipment.			
(12) recognize machine problems.			
(13) do minor machine repair, replace needles, etc.			
(14) adjust machines, stitching, etc.			
(15) use equipment and attachments.			
(16) read instruction manuals.			
(17) perform various construction techniques, seam finishes, etc.			
(18) set zippers in garments.			
(19) apply buttons, snaps, and other fasteners.			
(20) use correct measuring techniques.			
(21) repair imperfect work.			
(22) demonstrate manual dexterity.			
(23) hand sew buttons, hems, linings, finishing details.			
(24) use correct pressing techniques with steam pressing machine and/or hand iron.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(25) fold, pin, bag, tag, and box finished garments for shipping.			
(26) other: _____			
_____			
_____			
_____			
_____			
B. Related Knowledge The entry-level employee should:			
(1) understand terminology specific to industrial sewing.			
(2) have a working knowledge of fabrics.			
(3) have a working knowledge of threads.			
(4) understand marking procedures.			
(5) recognize good quality work, seams, etc.			
(6) other: _____			
_____			
_____			
_____			
_____			
C. Personal Work Habits and Attitudes The entry-level employee should:			
(1) be able to do good quality work.			
(2) be able to do a satisfactory quantity of work.			
(3) cooperate well with fellow workers.			
(4) accept supervision well.			
(5) listen to and follow instructions.			
(6) be dependable.			
(7) have regular attendance.			
(8) have initiative.			
(9) be prompt.			
(10) have an acceptable personal appearance.			
(11) adapt quickly to new situations.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(12) be able to discuss work related problems with supervisor.			
(13) apply proper safety procedures in work situation.			
(14) be willing to do routine work.			
(15) work under pressure.			
(16) other: _____			
_____			
_____			
_____			
_____			
D. General Knowledge of the World of Work The entry-level employee should:			
(1) know how to apply and interview for a job.			
(2) understand labor union membership.			
(3) know how to discuss wages.			
(4) understand employee benefits.			
(5) understand problems of industry or company management.			
(6) other: _____			
_____			
_____			
_____			
_____			

3. How much would you estimate that it costs you to train a person for such employment if he had received no previous occupational training or experience?

4. Does the occupational training make an appreciable difference in the time it takes for the employee to become productive at the job?

_____ yes _____ no

If yes, how much difference would you estimate?

5. What are the advancement opportunities in your company for graduates of high school occupational clothing programs?

6. Do you usually hire occupational program graduates at a higher wage than totally inexperienced beginning employees? _____ yes _____ no

If yes, how much higher?

7. How would you rate the preparation of the graduates of occupational programs for entry-level jobs? (Please check one of the following.)

_____Excellent: The graduates are well prepared. Very little additional training is necessary to develop into productive employees.

_____Good: The graduates demonstrate most of the expected entry-level competencies, but still need some additional training to become productive employees.

_____Fair: The graduates demonstrate a barely adequate knowledge of the expected entry-level competencies and require a great deal of further training to become productive.

_____Poor: The graduates require almost complete retraining before they become productive employees.

8. What specific suggestions do you have for improving the training and preparation of students in occupational clothing programs?

ALTERATION SPECIALIST

EMPLOYER INTERVIEW

Name_____Title_____
(Employer or Supervisor)

Name of Company_____

Address of Company_____Telephone_____

In order to arrive at a common understanding among employers in answering the interview questions, the following definitions are used:

Entry-Level Competencies are the knowledge, skills, and judgment which a beginning employee demonstrates at a predetermined proficiency level when first obtaining a position.

Essential to Employment refers to competencies which the beginning employee is expected to have in order to be hired.

Some Advantage to Employment indicates that the competency would be helpful to employment, but is not necessary for the person to be hired.

No Advantage to Employment indicates that the competency is of no value to employment in the company.

1. What are the titles of jobs for which graduates of occupational clothing training programs in high schools or area vocational-training schools have been employed, or could enter, in your company?

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

2. On the following pages are lists of possible entry-level competencies which employers may expect beginning employees who are graduates of occupational clothing programs in high schools or area vocational-technical schools to have when first becoming employed. To what degree are the following listed competencies important in the entry-level jobs for which you hire high school graduates from occupational clothing programs? Please check one of the columns for each item listed as the directions indicate.

Joyce Waldron
Teacher Educator
Department of Home Economics
Southwest Missouri State University
Springfield, Missouri 65802

Please check one of the columns for each item listed below. Under "other," write in any items which have not been included and which you consider essential or of some advantage to employment.

A. Working Competencies The entry-level employee should be able to:	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) fit garment on customer.			
(2) analyze fitting problems.			
(3) measure accurately.			
(4) mark garment for desired alterations.			
(5) write notes indicating alterations and instructions.			
(6) estimate cost of work and time for completion.			
(7) repair knitted and woven fabrics.			
(8) do a variety of alterations on a variety of garments.			
(9) replace different types of garment fasteners.			
(10) replace linings.			
(11) repair imperfect work.			
(12) use proper pressing techniques for fabric and garment design.			
(13) use conventional type sewing machine.			
(14) select and use equipment and tools needed for work.			
(15) recognize machine problems.			
(16) do minor machine repair, replace needles, clean and oil, etc.			
(17) adjust machine, stitching, etc.			
(18) read instruction manuals.			
(19) organize an efficient work area.			
(20) prepare customer's claim ticket.			
(21) handle customer complaints.			
(22) do routine office work.			
(23) use industrial sewing machine.			
(24) other: _____			
_____			
_____			
_____			
_____			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
B. Related Knowledge The entry-level employee should:			
(1) understand terminology specific to the alteration industry.			
(2) have a working knowledge of fabrics.			
(3) have a working knowledge of threads.			
(4) understand marking procedures.			
(5) recognize good quality work, seams, etc.			
(6) other: _____			
_____			
_____			
_____			
_____			
C. Personal Work Habits and Attitudes The entry-level employee should:			
(1) be able to do good quality work.			
(2) be able to do a satisfactory quantity of work.			
(3) cooperate well with fellow workers.			
(4) accept supervision well.			
(5) listen to and follow instructions.			
(6) be dependable.			
(7) have regular attendance.			
(8) have initiative.			
(9) be prompt.			
(10) have an acceptable personal appearance.			
(11) adapt quickly to new situations.			
(12) be able to discuss work related problems with supervisor.			
(13) apply proper safety procedures in work situation.			
(14) be willing to do routine work.			
(15) work under pressure.			
(16) other: _____			
_____			
_____			
_____			

D. General Knowledge of the World of Work

The entry-level employee should:

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) know how to apply and interview for a job.			
(2) understand labor union membership.			
(3) know how to discuss wages.			
(4) understand employee benefits.			
(5) understand problems of industry or company management.			
(6) other: _____			
_____			
_____			
_____			
_____			

3. How much would you estimate that it costs you to train a person for such employment if he had received no previous occupational training or experience?

4. Does the occupational training make an appreciable difference in the time it takes for the employee to become productive at the job?

_____ yes _____ no

If yes, how much difference would you estimate?

5. What are the advancement opportunities in your company for graduates of high school occupational clothing programs?

6. Do you usually hire occupational program graduates at a higher wage than totally inexperienced beginning employees? _____ yes _____ no

If yes, how much higher?

7. How would you rate the preparation of the graduates of occupational programs for entry-level jobs? (Please check one of the following.)

_____Excellent: The graduates are well prepared. Very little additional training is necessary to develop into productive employees.

_____Good: The graduates demonstrate most of the expected entry-level competencies, but still need some additional training to become productive employees.

_____Fair: The graduates demonstrate a barely adequate knowledge of the expected entry-level competencies and require a great deal of further training to become productive.

_____Poor: The graduates require almost complete retraining before they become productive employees.

8. What specific suggestions do you have for improving the training and preparation of students in occupational clothing programs?

DRY CLEANING AND LAUNDERING

EMPLOYER INTERVIEW

Name_____Title_____
(Employer or Supervisor)

Name of Company_____

Address of Company_____Telephone_____

In order to arrive at a common understanding among employers in answering the interview questions, the following definitions are used:

Entry-Level Competencies are the knowledge, skills, and judgment which a beginning employee demonstrates at a predetermined proficiency level when first obtaining a position.

Essential to Employment refers to competencies which the beginning employee is expected to have in order to be hired.

Some Advantage to Employment indicates that the competency would be helpful to employment, but is not necessary for the person to be hired.

No Advantage to Employment indicates that the competency is of no value to employment in the company.

1. What are the titles of jobs for which graduates of occupational clothing training programs in high schools or area vocational-technical schools have been employed, or could enter, in your company?

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

2. On the following pages are lists of possible entry-level competencies which employers may expect beginning employees who are graduates of occupational clothing programs in high schools or area vocational-technical schools to have when first becoming employed. To what degree are the following listed competencies important in the entry-level jobs for which you hire high school graduates from occupational clothing programs? Please check one of the columns for each item listed as the directions indicate.

Joyce Waldron
Teacher Educator
Department of Home Economics
Southwest Missouri State University
Springfield, Missouri 65802

3. How much would you estimate that it costs you to train a person for such employment if he had received no previous occupational training or experience?

4. Does the occupational training make an appreciable difference in the time it takes for the employee to become productive at the job?

_____ _____
yes no

If yes, how much difference would you estimate?

5. What are the advancement opportunities in your company for graduates of high school occupational clothing programs?

6. Do you usually hire occupational program graduates at a higher wage than totally inexperienced beginning employees? _____ _____
yes no

If Yes, how much higher?

7. How would you rate the preparation of the graduates of occupational programs for entry-level jobs? (Please check one of the following.)

_____Excellent: The graduates are well prepared. Very little additional training is necessary to develop into productive employees.

_____Good: The graduates demonstrate most of the expected entry-level competencies, but still need some additional training to become productive employees.

_____Fair: The graduates demonstrate a barely adequate knowledge of the expected entry-level competencies and require a great deal of further training to become productive.

_____Poor: The graduates require almost complete retraining before they become productive employees.

8. What specific suggestions do you have for improving the training and preparation of students in occupational clothing programs?

Please check one of the columns for each item listed below. Under "other," write in any items which have not been included and which you consider essential or of some advantage to employment.

A. Working Competencies The entry-level employee should be able to:	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) separate garments according to color and fiber content.			
(2) separate garments with spots and stains.			
(3) identify spots and stains.			
(4) use correct spot and stain removal procedures.			
(5) operate dry cleaning machine or washing machine properly for fiber content and garment type.			
(6) operate solvent extracting machine.			
(7) operate solvent distilling equipment.			
(8) apply proper drying procedures for various garments and fabrics.			
(9) determine proper use of fabric softeners, starch, solvents, dyes, chemical reagents, etc.			
(10) analyze needed garment repairs.			
(11) make minor repairs on garments.			
(12) reweave or repair holes in woven or knitted fabrics.			
(13) operate ironing and pressing equipment.			
(14) select correct ironing temperatures and procedures for garment style and fabric.			
(15) inspect finished garment.			
(16) hang or fold garments after cleaning and finishing.			
(17) prepare customer's claim ticket.			
(18) compare customer's garments with original invoice.			
(19) handle customer complaints.			
(20) do routine office work.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(21) order and stock new supplies, detergents, solvents, etc.			
(22) order new equipment.			
(23) organize efficient work space.			
(24) do minor routine maintenance work on equipment.			
(25) other: _____			
_____			
_____			
_____			
_____			
B. Related Knowledge The entry-level employee should:			
(1) understand terminology specific to the dry cleaning and laundering industry.			
(2) have a working knowledge of fabrics.			
(3) have a knowledge of chemical reactions of cleaning fluids, spot removers, etc. on specific fabrics.			
(4) recognize good quality work in pressing and repair of garments.			
(5) have a knowledge of the effect of temperature on specific fabrics.			
(6) other: _____			
_____			
_____			
_____			
_____			
C. Personal Work Habits and Attitudes The entry-level employee should:			
(1) be able to do good quality work.			
(2) be able to do a satisfactory quantity of work.			
(3) cooperate well with fellow workers.			
(4) accept supervision well.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(5) listen to and follow instructions.			
(6) be dependable.			
(7) have regular attendance.			
(8) have initiative.			
(9) be prompt.			
(10) have an acceptable personal appearance.			
(11) adapt quickly to new situations.			
(12) be able to discuss work related problems with supervisor.			
(13) apply proper safety procedures in work situation.			
(14) be willing to do routine work.			
(15) work under pressure.			
(16) other: _____			
_____			
_____			
_____			
_____			
D. General Knowledge of the World of Work The entry-level employee should:			
(1) know how to apply and interview for a job.			
(2) understand labor union membership.			
(3) know how to discuss wages.			
(4) understand employee benefits.			
(5) understand problems of industry or company management.			
(6) other: _____			
_____			
_____			
_____			
_____			

APPENDIX C

OCCUPATIONAL TEACHER QUESTIONNAIRES

OCCUPATIONAL CLOTHING TEACHER QUESTIONNAIRE

ON INDUSTRIAL SEWING

Please complete all 8 pages of this questionnaire and return it in the enclosed, stamped, addressed envelope to:

Miss Joyce Waldron
Assistant Professor of Home Economics
Southwest Missouri State University
901 S. National
Springfield, Missouri 65802

Thanks for your help. It is much appreciated.

****

In order to arrive at a common understanding among teachers in answering the questionnaire items, the following definitions are used:

Occupational Clothing Training includes courses which prepare the student to enter gainful employment in jobs in industry such as industrial sewing, alteration specialist, dry cleaning and laundering.

Clothing-related Occupations include jobs utilizing skills in and knowledge of sewing techniques or clothing care and maintenance.

Entry-level Competencies are the knowledge, skills, and judgment which a beginning employee demonstrates at a predetermined proficiency level when first obtaining a position.

I. General Information

1. Please complete the following information on your educational and occupational background.

College Major	Degrees Earned			Hours Earned Beyond Degree
	Bachelor's	Master's	Doctorate	
General Home Economics Education				
Vocational Home Economics Education				
Vocational-Technical Education				
Textiles and Clothing				
Other Major (Please Specify)				

2. Please check the type of vocational home economics or other certification which you presently have.

_____temporary certification
_____lifetime certification
_____other occupational certification (Please specify)
_____

3. What special professional courses have you taken to prepare you for teaching occupational clothing courses? (Please give names of courses.)

A. Undergraduate Courses

_____ _____

_____ _____

_____ _____

_____ _____

B. Graduate Courses

_____ _____

_____ _____

_____ _____

_____ _____

4. Please indicate below your personal work experience related to the occupational clothing area other than teaching.

Job Title	Length of Time Employed	Approximate Number of Hours Worked Per Week

5. Please indicate below your teaching experience in home economics and/or occupational programs.

Position	Type of Program (Homemaking or Occupational)	Grade Level	Courses Taught	Number of Years

6. Please indicate your teaching experience in areas other than home economics or occupational programs, if any.

Position	Grade Level	Courses Taught	Number of Years

7. Please list any other educational opportunities you have had which helped you learn about occupational programs. (Example: Reading specific professional journals - specify which ones; speeches and discussions at conferences; visiting schools which have occupational programs, etc.)

_____

_____

_____

_____

_____

8. Please give the titles of courses which you presently teach in occupational clothing:

_____ _____

_____ _____

_____ _____

9. Do you presently teach other home economics courses in addition to occupational clothing? _____yes _____no (Check one, please)

If yes, please list other courses taught.

_____

_____

_____

10. Please check the type of school in which you are presently teaching.

_____traditional high school
_____area vocational-technical school

11. How would you rate the preparation of the graduates of occupational clothing programs in your school for entry-level jobs? (Please check one of the following:)

_____Excellent: The graduates are well prepared. Very little additional training is necessary to develop into productive employees.
_____Good: The graduates demonstrate most of the expected entry-level competencies, but still need some additional training to become productive employees.
_____Fair: The graduates demonstrate a barely adequate knowledge of the expected entry-level competencies and require a great deal of further training to become productive.
_____Poor: The graduates require almost complete retraining before they become productive employees.

12. What specific suggestions do you have for improving the training and preparation of high school students in occupational clothing programs? (Use the back of the page if additional space is needed.)

13. What specific suggestions do you have for improving the training and preparation of teachers for occupational clothing programs? (Use the back of the page if additional space is needed.)

II. On the following pages are lists of possible entry-level competencies which employers may expect beginning employees who are graduates of occupational clothing programs in high schools or area vocational-technical schools to have when first becoming employed. To what degree are the following listed competencies important in the entry-level jobs for which you train high school students in occupational clothing programs? Please check one of the columns for each item listed as the directions indicate.

The definitions listed below may help you check the answers on the remainder of the questionnaire:

Essential to Employment refers to competencies which the beginning employee is expected to have in order to be hired.

Some Advantage to Employment indicates that the competency would be helpful to employment, but is not necessary for the person to be hired.

No Advantage to Employment indicates that the competency is of no value to employment in a company.

Please check one of the columns for each item listed below. Under "other," write in any items which have not been included and which you consider essential or of some advantage to employment.

A. Working Competencies The entry-level employee should be able to:	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) identify color shades.			
(2) color shade bolts of cloth.			
(3) lay fabric by hand or with spreading machine.			
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.			
(5) cut individual garments by hand.			
(6) sort cut parts and tie them into bundles.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(7) distribute bundles of garment parts and supplies to production workers.			
(8) mark location points on garment parts.			
(9) use conventional type sewing machine.			
(10) use a power machine.			
(11) organize work space and equipment.			
(12) recognize machine problems.			
(13) do minor machine repair, replace needles, etc.			
(14) adjust machines, stitching, etc.			
(15) use equipment and attachments.			
(16) read instruction manuals.			
(17) perform various construction techniques, seam finishes, etc.			
(18) set zippers in garments.			
(19) apply buttons, snaps, and other fasteners.			
(20) use correct measuring techniques.			
(21) repair imperfect work.			
(22) demonstrate manual dexterity.			
(23) hand sew buttons, hems, linings, finishing details.			
(24) use correct pressing techniques with steam pressing machine and/or hand iron.			
(25) fold, pin, bag, tag, and box finished garments for shipping.			
(26) other: _____			
_____			
_____			
_____			
_____			
B. Related Knowledge			
The entry-level employee should:			
(1) understand terminology specific to industrial sewing.			
(2) have a working knowledge of fabrics.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(3) have a working knowledge of threads.			
(4) understand marking procedures.			
(5) recognize good quality work, seams, etc.			
(6) other: _____			
_____			
_____			
_____			
_____			
C. Personal Work Habits and Attitudes The entry-level employee should:			
(1) be able to do good quality work.			
(2) be able to do a specified quantity of work.			
(3) cooperate with fellow workers.			
(4) accept supervision.			
(5) listen to and follow instructions.			
(6) be dependable.			
(7) have regular attendance.			
(8) have initiative.			
(9) be prompt.			
(10) have an acceptable personal appearance.			
(11) adapt quickly to new situations.			
(12) be able to discuss work related problems with supervisor.			
(13) apply proper safety procedures in work situations.			
(14) be willing to do routine work.			
(15) be able to work under pressure.			
(16) other: _____			
_____			
_____			
_____			
_____			

D. General Knowledge of the World of Work

The entry-level employee should:

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) know how to apply and interview for a job.			
(2) understand labor union membership.			
(3) know how to discuss wages.			
(4) understand employee benefits.			
(5) understand problems of industry or company management.			
(6) other: _____			
_____			
_____			
_____			
_____			

OCCUPATIONAL CLOTHING TEACHER QUESTIONNAIRE

ON ALTERATION SPECIALISTS

Please complete all 8 pages of this questionnaire and return it in the enclosed, stamped, addressed envelope to:

Miss Joyce Waldron
Assistant Professor of Home Economics
Southwest Missouri State University
901 S. National
Springfield, Missouri 65802

Thanks for your help. It is much appreciated.

****

In order to arrive at a common understanding among teachers in answering the questionnaire items, the following definitions are used:

Occupational Clothing Training includes courses which prepare the student to enter gainful employment in jobs in industry such as industrial sewing, alteration specialist, dry cleaning and laundering.

Clothing-related Occupations include jobs utilizing skills in and knowledge of sewing techniques or clothing care and maintenance.

Entry-level Competencies are the knowledge, skills, and judgment which a beginning employee demonstrates at a predetermined proficiency level when first obtaining a position.

I. General Information

1. Please complete the following information on your educational and occupational background.

College Major	Degrees Earned			Hours Earned Beyond Degree
	Bachelor's	Master's	Doctorate	
General Home Economics Education				
Vocational Home Economics Education				
Vocational-Technical Education				
Textiles and Clothing				
Other Major (Please Specify)				

2. Please check the type of vocational home economics or other certification which you presently have.

_____temporary certification
_____lifetime certification
_____other occupational certification (Please specify)
_____

3. What special professional courses have you taken to prepare you for teaching occupational clothing courses? (Please give names of courses.)

A. Undergraduate Courses

_____ _____

_____ _____

_____ _____

_____ _____

B. Graduate Courses

_____ _____

_____ _____

_____ _____

_____ _____

4. Please indicate below your personal work experience related to the occupational clothing area other than teaching.

Job Title	Length of Time Employed	Approximate Number of Hours Worked Per Week

5. Please indicate below your teaching experience in home economics and/or occupational programs.

Position	Type of Program (Homemaking or Occupational)	Grade Level	Courses Taught	Number of Years

6. Please indicate your teaching experience in areas other than home economics or occupational programs, if any.

Position	Grade Level	Courses Taught	Number of Years

7. Please list any other educational opportunities you have had which helped you learn about occupational programs. (Example: Reading specific professional journals - specify which ones; speeches and discussions at conferences; visiting schools which have occupational programs, etc.)

_____

_____

_____

_____

_____

8. Please give the titles of courses which you presently teach in occupational clothing:

_____ _____

_____ _____

_____ _____

9. Do you presently teach other home economics courses in addition to occupational clothing? _____yes _____no (Check one, please)

If yes, please list other courses taught.

_____

_____

_____

10. Please check the type of school in which you are presently teaching.

_____traditional high school
_____area vocational-technical school

11. How would you rate the preparation of the graduates of occupational clothing programs in your school for entry-level jobs? (Please check one of the following:)

_____Excellent: The graduates are well prepared. Very little additional training is necessary to develop into productive employees.
_____Good: The graduates demonstrate most of the expected entry-level competencies, but still need some additional training to become productive employees.
_____Fair: The graduates demonstrate a barely adequate knowledge of the expected entry-level competencies and require a great deal of further training to become productive.
_____Poor: The graduates require almost complete retraining before they become productive employees.

12. What specific suggestions do you have for improving the training and preparation of <u>high school students</u> in occupational clothing programs? (Use the back of the page if additional space is needed.)

13. What specific suggestions do you have for improving the training and preparation of teachers for occupational clothing programs? (Use the back of the page if additional space is needed.)

II. On the following pages are lists of possible entry-level competencies which employers may expect beginning employees who are graduates of occupational clothing programs in high schools or area vocational-technical schools to have when first becoming employed. To what degree are the following listed competencies important in the entry-level jobs for which you train high school students in occupational clothing programs? Please check one of the columns for each item listed as the directions indicate.

The definitions listed below may help you check the answers on the remainder of the questionnaire:

Essential to Employment refers to competencies which the beginning employee is expected to have in order to be hired.

Some Advantage to Employment indicates that the competency would be helpful to employment, but is not necessary for the person to be hired.

No Advantage to Employment indicates that the competency is of no value to employment in a company.

Please check one of the columns for each item listed below. Under "other," write in any items which have not been included and which you consider essential or of some advantage to employment.

A. Working Competencies The entry-level employee should be able to:	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) fit garment on customer.			
(2) analyze fitting problems.			
(3) measure accurately.			
(4) mark garment for desired alterations.			
(5) write notes indicating alterations and instructions.			
(6) estimate cost of work and time for completion.			
(7) repair knitted and woven fabrics.			
(8) do a variety of alterations on a variety of garments.			
(9) replace different types of garment fasteners.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(10) replace linings.			
(11) repair imperfect work.			
(12) use proper pressing techniques for fabric and garment design.			
(13) use conventional type sewing machine.			
(14) select and use equipment and tools needed for work.			
(15) recognize machine problems.			
(16) do minor machine repair, replace needles, clean and oil, etc.			
(17) adjust machine, stitching, etc.			
(18) read instruction manuals.			
(19) organize an efficient work area.			
(20) prepare customer's claim ticket.			
(21) handle customer complaints.			
(22) do routine office work.			
(23) use industrial sewing machine.			
(24) other: _____			
_____			
_____			
_____			
_____			
B. Related Knowledge			
The entry-level employee should:			
(1) understand terminology specific to the alteration industry.			
(2) have a working knowledge of fabrics.			
(3) have a working knowledge of threads.			
(4) understand marking procedures.			
(5) recognize good quality work, seams, etc.			
(6) other: _____			
_____			
_____			
_____			
_____			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
C. Personal Work Habits and Attitudes The entry-level employee should:			
(1) be able to do good quality work.			
(2) be able to do a specified quantity of work.			
(3) cooperate with fellow workers.			
(4) accept supervision.			
(5) listen to and follow instructions.			
(6) be dependable.			
(7) have regular attendance.			
(8) have initiative.			
(9) be prompt.			
(10) have an acceptable personal appearance.			
(11) adapt quickly to new situations.			
(12) be able to discuss work related problems with supervisor.			
(13) apply proper safety procedures in work situation.			
(14) be willing to do routine work.			
(15) be able to work under pressure.			
(16) other: _____			
_____			
_____			
_____			
_____			
D. General Knowledge of the World of Work The entry-level employee should:			
(1) know how to apply and interview for a job.			
(2) understand labor union membership.			
(3) know how to discuss wages.			
(4) understand employee benefits.			
(5) understand problems of industry or company management.			
(6) other: _____			
_____			
_____			
_____			
_____			

OCCUPATIONAL CLOTHING TEACHER QUESTIONNAIRE ON DRY CLEANING AND LAUNDERING

Please complete all 8 pages of this questionnaire and return it in the enclosed, stamped, addressed envelope to:

Miss Joyce Waldron
Assistant Professor of Home Economics
Southwest Missouri State University
901 S. National
Springfield, Missouri 65802

Thanks for your help. It is much appreciated.

****

In order to arrive at a common understanding among teachers in answering the questionnaire items, the following definitions are used:

Occupational Clothing Training includes courses which prepare the student to enter gainful employment in jobs in industry such as industrial sewing, alteration specialist, dry cleaning and laundering.

Clothing-related Occupations include jobs utilizing skills in and knowledge of sewing techniques or clothing care and maintenance.

Entry-level Competencies are the knowledge, skills, and judgment which a beginning employee demonstrates at a predetermined proficiency level when first obtaining a position.

I. General Information

1. Please complete the following information on your educational and occupational background.

College Major	Degrees Earned			Hours Earned Beyond Degree
	Bachelor's	Master's	Doctorate	
General Home Economics Education				
Vocational Home Economics Education				
Vocational-Technical Education				
Textiles and Clothing				
Other Major (Please Specify)				

2. Please check the type of vocational home economics or other certification which you presently have.

_____temporary certification
_____lifetime certification
_____other occupational certification (Please specify)
_____

3. What special professional courses have you taken to prepare you for teaching occupational clothing courses? (Please give names of courses.)

A. Undergraduate Courses

_____ _____
_____ _____
_____ _____
_____ _____

B. Graduate Courses

_____ _____
_____ _____
_____ _____
_____ _____

4. Please indicate below your personal work experience related to the occupational clothing area other than teaching.

Job Title	Length of Time Employed	Approximate Number of Hours Worked Per Week

5. Please indicate below your teaching experience in home economics and/or occupational programs.

Position	Type of Program (Homemaking or Occupational)	Grade Level	Courses Taught	Number of Years

6. Please indicate your teaching experience in areas other than home economics or occupational programs, if any.

Position	Grade Level	Courses Taught	Number of Years

7. Please list any other educational opportunities you have had which helped you learn about occupational programs. (Example: Reading specific professional journals - specify which ones; speeches and discussions at conferences; visiting schools which have occupational programs, etc.)

_____

_____

_____

_____

_____

8. Please give the titles of courses which you presently teach in occupational clothing:

_____ _____

_____ _____

_____ _____

9. Do you presently teach other home economics courses in addition to occupational clothing? _____yes _____no (Check one, please)

If yes, please list other courses taught.

_____

_____

_____

10. Please check the type of school in which you are presently teaching.

_____traditional high school
_____area vocational-technical school

11. How would you rate the preparation of the graduates of occupational clothing programs in your school for entry-level jobs? (Please check one of the following:)

_____Excellent: The graduates are well prepared. Very little additional training is necessary to develop into productive employees.

_____Good: The graduates demonstrate most of the expected entry-level competencies, but still need some additional training to become productive employees.

_____Fair: The graduates demonstrate a barely adequate knowledge of the expected entry-level competencies and require a great deal of further training to become productive.

_____Poor: The graduates require almost complete retraining before they become productive employees.

12. What specific suggestions do you have for improving the training and preparation of high school students in occupational clothing programs? (Use the back of the page if additional space is needed.)

13. What specific suggestions do you have for improving the training and preparation of teachers for occupational clothing programs? (Use the back of the page if additional space is needed.)

II. On the following pages are lists of possible entry-level competencies which employers may expect beginning employees who are graduates of occupational clothing programs in high schools or area vocational-technical schools to have when first becoming employed. To what degree are the following listed competencies important in the entry-level jobs for which you train high school students in occupational clothing programs? Please check one of the columns for each item listed as the directions indicate.

The definitions listed below may help you check the answers on the remainder of the questionnaire:

Essential to Employment refers to competencies which the beginning employee is expected to have in order to be hired.

Some Advantage to Employment indicates that the competency would be helpful to employment, but is not necessary for the person to be hired.

No Advantage to Employment indicates that the competency is of no value to employment in a company.

Please check one of the columns for each item listed below. Under "other," write in any items which have not been included and which you consider essential or of some advantage to employment.

A. Working Competencies The entry-level employee should be able to:	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) separate garments according to color and fiber content.			
(2) separate garments with spots and stains.			
(3) identify spots and stains.			
(4) use correct spot and stain removal procedures.			
(5) operate dry cleaning machine or washing machine properly for fiber content and garment type.			
(6) operate solvent extracting machine.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(7) operate solvent distilling equipment.			
(8) apply proper drying procedures for various garments and fabrics.			
(9) determine proper use of fabric softeners, starch, solvents, dyes, chemical reagents, etc.			
(10) analyze needed garment repairs.			
(11) make minor repairs on garments.			
(12) reweave or repair holes in woven or knitted fabrics.			
(13) operate ironing and pressing equipment.			
(14) select correct ironing temperatures and procedures for garment style and fabric.			
(15) inspect finished garment.			
(16) hang or fold garments after cleaning and finishing.			
(17) prepare customer's claim ticket.			
(18) compare customer's garments with original invoice.			
(19) handle customer complaints.			
(20) do routine office work.			
(21). order and stock new supplies, detergents, solvents, etc.			
(22) order new equipment.			
(23) organize efficient work space.			
(24) do minor routine maintenance work on equipment.			
(25) other: _____			
_____			
_____			
_____			
_____			
B. Related Knowledge The entry-level employee should:			
(1) understand terminology specific to the dry cleaning and laundering industry.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(2) have a working knowledge of fabrics.			
(3) have a knowledge of chemical reactions of cleaning fluids, spot removers, etc. on specific fabrics.			
(4) recognize good quality work in pressing and repair of garments.			
(5) have a knowledge of the effect of temperature on specific fabrics.			
(6) other: _____			
_____			
_____			
_____			
_____			
C. Personal Work Habits and Attitudes The entry-level employee should:			
(1) be able to do good quality work.			
(2) be able to do a specified quantity of work.			
(3) cooperate with fellow workers.			
(4) accept supervision.			
(5) listen to and follow instructions.			
(6) be dependable.			
(7) have regular attendance.			
(8) have initiative.			
(9) be prompt.			
(10) have an acceptable personal appearance.			
(11) adapt quickly to new situations.			
(12) be able to discuss work related problems with supervisor.			
(13) apply proper safety procedures in work situation.			
(14) be willing to do routine work.			
(15) be able to work under pressure.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(16) other: _____			
_____			
_____			
_____			
_____			
D. General Knowledge of the World of Work The entry-level employee should:			
(1) know how to apply and interview for a job.			
(2) understand labor union membership.			
(3) know how to discuss wages.			
(4) understand employee benefits.			
(5) understand problems of industry or company management.			
(6) other: _____			
_____			
_____			
_____			
_____			

APPENDIX D

OCCUPATIONAL CLOTHING GRADUATE QUESTIONNAIRES

OCCUPATIONAL CLOTHING GRADUATE QUESTIONNAIRE

ON INDUSTRIAL SEWING

Please complete all 6 pages of this questionnaire and return it in the stamped, addressed envelope to:

Miss Joyce Waldron
Assistant Professor of Home Economics
Southwest Missouri State University
901 S. National
Springfield, Missouri 65802

Thanks for your help. It is much appreciated.

****

In order to arrive at a common understanding among graduates in answering the questionnaire items, the following definitions are used:

Occupational Clothing Training includes courses which prepare the student to enter gainful employment in jobs in industry such as industrial sewing, alteration specialist, dry cleaning and laundering.

Clothing-related Occupations include jobs utilizing skills in and knowledge of sewing techniques or clothing care and maintenance.

Entry-level Competencies are the knowledge, skills, and judgment which a beginning employee demonstrates at a predetermined proficiency level when first obtaining a position.

I. General Information

1. Date graduated from high school _____ (month and year)

2. Sex (Check one, please) _____Female _____Male

3. Were your occupational clothing courses taken in a (Check one, please)

   _____traditional high school? _____area vocational-technical school?

4. What is the job title of your present or most recent clothing-related occupation? (Example: Dressmaker, Alterationist, Sewing Machine Operator, Dry Cleaner, Presser, Launderer)

   _____

5. Please list below each job you have had since graduation from high school; indicate the number of months or weeks in each job; and tell why you left each job if you are no longer working there.

Job Title	Length of Time Employed (Months) (Weeks)	Reason for Leaving

6. What junior or senior high school or vocational-technical courses did you take which gave you experience that helped you obtain and hold a job in a clothing-related occupation? (Example: Clothing Care Services, Industrial Sewing, Tailoring, Dry Cleaning, Typing, Bookkeeping, English, etc.)

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

7. Did you have any on-the-job occupational experience in clothing-related occupations outside the classroom when you were a junior or senior?

_____yes _____no (Check one, please)

If yes, where and what type of experience did you have?

Where did you work?

What did you do?

How long did you work?

8. Do you feel that you needed more on-the-job experience before completing the occupational training program? _____yes _____no
(Check one, please)

9. If you are not presently working in a clothing-related occupation utilizing the training which you received in high school, please check the reason(s) why.

_____I do not wish to work.

_____I do not like that type of work.

_____I can't get a job in that field where I am living.

_____My training was not adequate.

_____Wages are not high enough.

_____I am married and do not wish to work for that reason.

_____I am in school.

_____Other: (Please specify)_____

10. How would you rate your training in preparing you for employment in an entry-level clothing-related occupation? (Please check one of the following:)

_____Excellent: I was well prepared. Very little additional training was necessary to develop into a productive employee.

_____Good: I could demonstrate most of the expected entry-level competencies, but still needed some additional training to become a productive employee.

_____Fair: I could demonstrate a barely adequate knowledge of the expected entry-level competencies and required a great deal of further training to become productive.

_____Poor: I needed almost complete retraining before becoming a productive employee.

11. What specific suggestions do you have for improving the training and preparation of students in occupational clothing programs?

II. On the following pages are lists of possible entry-level competencies which employers may expect beginning employees who are graduates of occupational clothing programs in high schools or area vocational-technical schools to have when first becoming employed. To what degree were the following listed competencies important in the entry-level clothing-related jobs for which you were hired? Please check one of the columns for each item listed as the directions indicate.

The definitions listed below may help you check the answers on the remainder of the questionnaire:

Essential to Employment refers to competencies which the beginning employee is expected to have in order to be hired.

Some Advantage to Employment indicates that the competency would be helpful to employment, but is not necessary for the person to be hired.

No Advantage to Employment indicates that the competency is of no value to employment in the company.

Please check one of the columns for each item listed below. Under "other," write in any items which have not been included and which you consider essential or of some advantage to employment.

A. Working Competencies The entry-level employee should be able to:	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) identify color shades.			
(2) color shade bolts of cloth.			
(3) lay fabric by hand or with spreading machine.			
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.			
(5) cut individual garments by hand.			
(6) sort out parts and tie them into bundles.			
(7) distribute bundles of garment parts and supplies to production workers.			
(8) mark location points on garment parts.			
(9) use conventional type sewing machine.			
(10) use a power machine.			
(11) organize work space and equipment.			
(12) recognize machine problems.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(13) do minor machine repair, replace needles, etc.			
(14) adjust machines, stitching, etc.			
(15) use equipment and attachments.			
(16) read instruction manuals.			
(17) perform various construction techniques, seam finishes, etc.			
(18) set zippers in garments.			
(19) apply buttons, snaps, and other fasteners.			
(20) use correct measuring techniques.			
(21) repair imperfect work.			
(22) demonstrate manual dexterity.			
(23) hand sew buttons, hems, linings, finishing details.			
(24) use correct pressing techniques with steam pressing machine and/or hand iron.			
(25) fold, pin, bag, tag, and box finished garments for shipping.			
(26) other:_____			
_____			
_____			
_____			
_____			
B. Related Knowledge The entry-level employee should:			
(1) understand terminology specific to industrial sewing.			
(2) have a working knowledge of fabrics.			
(3) have a working knowledge of threads.			
(4) understand marking procedures.			
(5) recognize good quality work, seams, etc.			
(6) Other:_____			
_____			
_____			
_____			
_____			

C. Personal Work Habits and Attitudes The entry-level employee should:	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) be able to do good quality work.			
(2) be able to do a specified quantity of work.			
(3) cooperate with fellow workers.			
(4) accept supervision.			
(5) listen to and follow instructions.			
(6) be dependable.			
(7) have regular attendance.			
(8) have initiative.			
(9) be prompt.			
(10) have an acceptable personal appearance.			
(11) adapt quickly to new situations.			
(12) be able to discuss work related problems with supervisor.			
(13) apply proper safety procedures in work situation.			
(14) be willing to do routine work.			
(15) be able to work under pressure.			
(16) other: _____			
_____			
_____			
_____			
_____			
D. General Knowledge of the World of Work The entry-level employee should:			
(1) know how to apply and interview for a job.			
(2) understand labor union membership.			
(3) know how to discuss wages.			
(4) understand employee benefits.			
(5) understand problems of industry or company management.			
(6) other: _____			
_____			
_____			
_____			
_____			

OCCUPATIONAL CLOTHING GRADUATE QUESTIONNAIRE

ON ALTERATION SPECIALISTS

Please complete all 6 pages of this questionnaire and return it in the enclosed, stamped, addressed envelope to:

Miss Joyce Waldron
Assistant Professor of Home Economics
Southwest Missouri State University
901 S. National
Springfield, Missouri 65802

Thanks for your help. It is much appreciated.

****

In order to arrive at a common understanding among graduates in answering the questionnaire items, the following definitions are used:

Occupational Clothing Training includes courses which prepare the student to enter gainful employment in jobs in industry such as industrial sewing, alteration specialist, dry cleaning and laundering.

Clothing-related Occupations include jobs utilizing skills in and knowledge of sewing techniques or clothing care and maintenance.

Entry-level Competencies are the knowledge, skills, and judgment which a beginning employee demonstrates at a predetermined proficiency level when first obtaining a position.

I. General Information

1. Date graduated from high school_____(month and year)

2. Sex (Check one, please) _____Female _____Male

3. Were your occupational clothing courses taken in a (Check one, please)
_____traditional high school _____area vocational-technical school?

4. What is the job title of your present or most recent clothing-related occupation? (Example: Dressmaker, Alterationist, Sewing Machine Operator, Dry Cleaner, Presser, Launderer)

_____

5. Please list below each job you have had since graduation from high school; indicate the number of months or weeks in each job; and tell why you left each job if you are no longer working there.

Job Title	Length of Time Employed (Months) (Weeks)	Reason for Leaving

6. What junior or senior high school or vocational-technical courses did you take which gave you experience that helped you obtain and hold a job in a clothing-related occupation? (Example: Clothing Care Services, Industrial Sewing, Tailoring, Dry Cleaning, Typing, Bookkeeping, English, etc.)

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

7. Did you have any on-the-job occupational experience in clothing-related occupations outside the classroom when you were a junior or senior?

_____yes _____no (Check one, please)

If yes, where and what type of experience did you have?

Where did you work?

What did you do?

How long did you work?

8. Do you feel that you needed more on-the-job experience before completing the occupational training program? _____yes _____no
(Check one, please)

9. If you are not presently working in a clothing-related occupation utilizing the training which you received in high school, please check the reason(s) why.

_____I do not wish to work.

_____I do not like that type of work.

_____I can't get a job in that field where I am living.

_____My training was not adequate.

_____Wages are not high enough.

_____I am married and do not wish to work for that reason.

_____I am in school.

_____Other: (Please specify)_____

10. How would you rate your training in preparing you for employment in an entry-level clothing-related occupation? (Please check one of the following:)

_____Excellent: I was well prepared. Very little additional training was necessary to develop into a productive employee.

_____Good: I could demonstrate most of the expected entry-level competencies, but still needed some additional training to become a productive employee.

_____Fair: I could demonstrate a barely adequate knowledge of the expected entry-level competencies and required a great deal of further training to become productive.

_____Poor: I needed almost complete retraining before becoming a productive employee.

11. What specific suggestions do you have for improving the training and preparation of students in occupational clothing programs?

II. On the following pages are lists of possible entry-level competencies which employers may expect beginning employees who are graduates of occupational clothing programs in high schools or area vocational-technical schools to have when first becoming employed. To what degree were the following listed competencies important in the entry-level clothing-related jobs for which you were hired? Please check one of the columns for each item listed as the directions indicate.

The definitions listed below may help you check the answers on the remainder of the questionnaire:

Essential to Employment refers to competencies which the beginning employee is expected to have in order to be hired.

Some Advantage to Employment indicates that the competency would be helpful to employment, but is not necessary for the person to be hired.

No Advantage to Employment indicates that the competency is of no value to employment in the company.

Please check one of the columns for each item listed below. Under "other," write in any items which have not been included and which you consider essential or of some advantage to employment.

A. Working Competencies The entry-level employee should be able to:	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) fit garment on customer.			
(2) analyze fitting problems.			
(3) measure accurately.			
(4) mark garment for desired alterations.			
(5) write notes indicating alterations and instructions.			
(6) estimate cost of work and time for completion.			
(7) repair knitted and woven fabrics.			
(8) do a variety of alterations on a variety of garments.			
(9) replace different types of garment fasteners.			
(10) replace linings.			
(11) repair imperfect work.			
(12) use proper pressing techniques for fabric and garment design.			
(13) use conventional type sewing machine.			
(14) select and use equipment and tools needed for work.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(15) recognize machine problems.			
(16) do minor machine repair, replace needles, clean and oil, etc.			
(17) adjust machine, stitching, etc.			
(18) read instruction manuals.			
(19) organize an efficient work area.			
(20) prepare customer's claim ticket.			
(21) handle customer complaints.			
(22) do routine office work.			
(23) use industrial sewing machine.			
(24) other:_____			
_____			
_____			
_____			
_____			
B. Related Knowledge The entry-level employee should:			
(1) understand terminology specific to the alteration industry.			
(2) have a working knowledge of fabrics.			
(3) have a working knowledge of threads.			
(4) understand marking procedures.			
(5) recognize good quality work, seams, etc.			
(6) other:_____			
_____			
_____			
_____			
_____			
C. Personal Work Habits and Attitudes The entry-level employee should:			
(1) be able to do good quality work.			
(2) be able to do a specified quantity of work.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(3) cooperate with fellow workers.			
(4) accept supervision.			
(5) listen to and follow instructions.			
(6) be dependable.			
(7) have regular attendance.			
(8) have initiative.			
(9) be prompt.			
(10) have an acceptable personal appearance.			
(11) adapt quickly to new situations.			
(12) be able to discuss work related problems with supervisor.			
(13) apply proper safety procedures in work situation.			
(14) be willing to do routine work.			
(15) be able to work under pressure.			
(16) other:_____			
_____			
_____			
_____			
_____			
D. General Knowledge of the World of Work The entry-level employee should:			
(1) know how to apply and interview for a job.			
(2) understand labor union membership.			
(3) know how to discuss wages.			
(4) understand employee benefits.			
(5) understand problems of industry or company management.			
(6) other:_____			
_____			
_____			
_____			
_____			

OCCUPATIONAL CLOTHING GRADUATE QUESTIONNAIRE

ON DRY CLEANING AND LAUNDERING

Please complete all 7 pages of this questionnaire and return it in the stamped, addressed envelope to:

Miss Joyce Waldron
Assistant Professor of Home Economics
Southwest Missouri State University
901 S. National
Springfield, Missouri 65802

Thanks for your help. It is much appreciated.

****

In order to arrive at a common understanding among graduates in answering the questionnaire items, the following definitions are used:

Occupational Clothing Training includes courses which prepare the student to enter gainful employment in jobs in industry such as industrial sewing, alteration specialist, dry cleaning and laundering.

Clothing-related Occupations include jobs utilizing skills in and knowledge of sewing techniques or clothing care and maintenance.

Entry-level Competencies are the knowledge, skills and judgment which a beginning employee demonstrates at a predetermined proficiency level when first obtaining a position.

I. General Information

1. Date graduated from high school _____ (month and year)

2. Sex (Check one, please) _____ Female _____ Male

3. Were your occupational clothing courses taken in a (Check one, please)
_____ traditional high school? _____ area vocational-technical school?

4. What is the job title of your present or most recent clothing-related occupation? (Example: Dressmaker, Alterationist, Sewing Machine Operator, Dry Cleaner, Presser, Launderer)

_____

5. Please list below each job you have had since graduation from high school; indicate the number of months or weeks in each job; and tell why you left each job if you are no longer working there.

Job Title	Length of Time Employed (Months) (Weeks)	Reason for Leaving

6. What junior or senior high school or vocational-technical courses did you take which gave you experience that helped you obtain and hold a job in a clothing-related occupation: (Example: Clothing Care Services, Industrial Sewing, Tailoring, Dry Cleaning, Typing, Bookkeeping, English, etc.)

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

7. Did you have any on-the-job occupational experience in clothing-related occupations outside the classroom when you were a junior or senior?

_____yes _____no (Check one, please)

If yes, where and what type of experience did you have?

Where did you work?

What did you do?

How long did you work?

8. Do you feel that you needed more on-the-job experience before completing the occupational training program? _____yes _____no
(Check one, please)

9. If you are not presently working in a clothing-related occupation utilizing the training which you received in high school, please check the reason(s) why.

_____I do not wish to work.

_____I do not like that type of work.

_____I can't get a job in that field where I am living.

_____My training was not adequate.

_____Wages are not high enough.

_____I am married and do not wish to work for that reason.

_____I am in school.

_____Other: (Please specify)_____

10. How would you rate your training in preparing you for employment in an entry-level clothing-related occupation? (Please check one of the following:)

_____Excellent: I was well prepared. Very little additional training was necessary to develop into a productive employee.

_____Good: I could demonstrate most of the expected entry-level competencies, but still needed some additional training to become a productive employee.

_____Fair: I could demonstrate a barely adequate knowledge of the expected entry-level competencies and required a great deal of further training to become productive.

_____Poor: I needed almost complete retraining before becoming a productive employee.

11. What specific suggestions do you have for improving the training and preparation of students in occupational clothing programs?

II. On the following pages are lists of possible entry-level competencies which employers may expect beginning employees who are graduates of occupational clothing programs in high schools or area vocational-technical schools to have when first becoming employed. To what degree were the following listed competencies important in the entry-level clothing-related jobs for which you were hired? Please check one of the columns for each item listed as the directions indicate.

The definitions listed below may help you check the answers on the remainder of the questionnaire:

Essential to Employment refers to competencies which the beginning employee is expected to have in order to be hired.

Some Advantage to Employment indicates that the competency would be helpful to employment, but is not necessary for the person to be hired.

No Advantage to Employment indicates that the competency is of no value to employment in the company.

Please check one of the columns for each item listed below. Under "other," write in any items which have not been included and which you consider essential or of some advantage to employment.

A. Working Competencies The entry-level employee should be able to:	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) separate garments according to color and fiber content.			
(2) separate garments with spots and stains.			
(3) identify spots and stains.			
(4) use correct spot and stain removal procedures.			
(5) operate dry cleaning machine or washing machine properly for fiber content and garment type.			
(6) operate solvent extracting machine.			
(7) operate solvent distilling equipment.			
(8) apply proper drying procedures for various garments and fabrics.			
(9) determine proper use of fabric softeners, starch, solvents, dyes, chemical reagents, etc.			
(10) analyze needed garment repairs.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(11) make minor repairs on garments.			
(12) reweave or repair holes in woven or knitted fabrics.			
(13) operate ironing and pressing equipment.			
(14) select correct ironing temperatures and procedures for garment style and fabric.			
(15) inspect finished garment.			
(16) hang or fold garments after cleaning and finishing.			
(17) prepare customer's claim ticket.			
(18) compare customer's garments with original invoice.			
(19) handle customer complaints.			
(20) do routine office work.			
(21) order and stock new supplies, detergents, solvents, etc.			
(22) order new equipment.			
(23) organize efficient work space.			
(24) do minor routine maintenance work on equipment.			
(25) other:_____			
_____			
_____			
_____			
_____			
B. Related Knowledge The entry-level employee should:			
(1) understand terminology specific to the dry cleaning and laundering industry.			
(2) have a working knowledge of fabrics.			
(3) have a knowledge of chemical reactions of cleaning fluids, spot removers, etc. on specific fabrics.			
(4) recognize good quality work in pressing and repair of garments.			

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(5) have a knowledge of the effect of temperature on specific fabrics.			
(6) other: _____			
C. Personal Work Habits and Attitudes The entry-level employee should:			
(1) be able to do good quality work.			
(2) be able to do a specified quantity of work.			
(3) cooperate with fellow workers.			
(4) accept supervision.			
(5) listen to and follow instructions.			
(6) be dependable.			
(7) have regular attendance.			
(8) have initiative.			
(9) be prompt.			
(10) have an acceptable personal appearance.			
(11) adapt quickly to new situations.			
(12) be able to discuss work related problems with supervisor.			
(13) apply proper safety procedures in work situation.			
(14) be willing to do routine work.			
(15) be able to work under pressure.			
(16) other: _____			

D. General Knowledge of the World of Work

The entry-level employee should:

	Essential to Employment	Some Advantage to Employment	No Advantage to Employment
(1) know how to apply and interview for a job.			
(2) understand labor union membership.			
(3) know how to discuss wages.			
(4) understand employee benefits.			
(5) understand problems of industry or company management.			
(6) other: _____			
_____			
_____			
_____			
_____			

APPENDIX E

CHI SQUARES FOR ENTRY-LEVEL COMPETENCIES

TABLE XXII

CHI SQUARES OF EACH ENTRY-LEVEL COMPETENCY FOR INDUSTRIAL SEWING BY GROUPS (EMPLOYERS, TEACHERS, GRADUATES), TYPES OF MANUFACTURING (GARMENTS, SHOES, TOYS) AND DEGREE OF IMPORTANCE (DEGREES OF FREEDOM GIVEN)

Competency Number	Essential Comp. by Groups 2 df	Essential Comp. by Manuf.# 2 df	Degree of Imp. by Groups 4 df	Degree of Imp. by Manuf.# 4 df
A. Working Competencies The entry-level employee should be able to:				
(1) identify color shades.	2.49	9.29*	15.35*	10.12*
(2) color shade bolts of cloth.	2.01	4.67	9.99**	5.76
(3) lay fabric by hand or with spreading machine	1.82	3.26	3.37	9.78*
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.	1.86	0.61	2.61	8.33
(5) cut individual garments by hand.	6.34	3.49	8.55	9.86*
(6) sort cut parts and tie them into bundles.	0.48	10.01***	4.53	10.22***
(7) distribute bundles of garment parts and supplies to production workers.	4.32	4.65	6.74	5.54
(8) mark location points on garment parts.	2.03	0.74	8.95	2.74
(9) use conventional type sewing machine.	*5.88***	2.00	8.12	3.59
(10) use a power machine.	0.78		0.01	1.52
(11) organize work space and equipment.	7.89**	2.36	14.72**	4.63

TABLE XXII (Continued)

Competency Number	Essential Comp. by Groups 2 df	Essential Comp. by Manuf.# 2 df	Degree of Imp. by Groups 4 df	Degree of Imp. by Manuf.# 4 df
A. Working Competencies The entry-level employee should be able to:				
(12) recognize machine problems.	1.13	0.97	8.26	2.45
(13) do minor machine repair, replace needles, etc.	0.78	3.54	4.85	5.45
(14) adjust machines, stitching, etc.	3.48	0.97	12.55**	3.28
(15) use equipment and attachments.	*7.43**	0.28	9.05**	3.72
(16) read instruction manuals.	3.42	0.36	20.86**	4.39
(17) perform various construction techniques, seam finishes, etc.	3.34	13.20*	9.19**	14.87*
(18) set zippers in garments.	0.69	12.71***	5.83	19.91***
(19) apply buttons, snaps, and other fasteners.	1.65	15.70***	7.76	17.94***
(20) use correct measuring techniques.	0.45	0.46	4.44	3.53
(21) repair imperfect work.	0.38	0.46	3.35	4.49
(22) demonstrate manual dexterity.	0.38	0.18	10.09***	4.19
(23) hand sew buttons, hems, linings, finishing details.	0.32	7.89*	13.81**	14.30*
(24) use correct pressing techniques with steam pressing machine and/or hand iron.	1.58	13.18***	5.79	14.20***
(25) fold, pin, bag, tag, and box finished garments for shipping.	0.57	4.73	4.90	6.44

TABLE XXII (Continued)

Competency Number	Essential Comp. by Groups 2 df	Essential Comp. by Manuf.# 2 df	Degree of Imp. by Groups 4 df	Degree of Imp. by Manuf.# 4 df
B. Related Knowledge				
The entry-level employee should:				
(1) understand terminology specific to industrial sewing.	0.78	3.54	1.39	8.93
(2) have a working knowledge of fabrics.	1.71	0.64	4.44	2.41
(3) have a working knowledge of threads.	1.59	1.26	5.25	5.51
(4) understand marking procedures.	0.78	3.54	4.20	5.75
(5) recognize good quality work, seams, etc.	0.78	2.97	8.50	4.37
C. Personal Work Habits and Attitudes				
The entry-level employee should:				
(1) be able to do good quality work.			1.20	3.11
(2) be able to do a specified quantity of work.			2.72	0.28
(3) cooperate with fellow workers.			5.14	0.86
(4) accept supervision.	0.78	2.97	2.12	4.84
(5) listen to and follow instructions.	0.78	2.97	1.38	3.87
(6) be dependable.	0.78	2.97	2.92	3.93
(7) have regular attendance.	0.78	2.97	2.12	4.10
(8) have initiative.	0.78	2.97	8.65	4.40
(9) be prompt.	0.78	2.97	1.38	3.88
(10) have an acceptable personal appearance.	0.78	2.97	10.57**	3.37
(11) adapt quickly to new situations.	1.59	2.30	6.09	4.96

TABLE XXII (Continued)

Competency Number	Essential Comp. by Groups 2 df	Essential Comp. by Manuf.# 2 df	Degree of Imp. by Groups 4 df	Degree of Imp. by Manuf.# 4 df
C. Personal Work Habits and Attitudes				
The entry-level employee should:				
(12) be able to discuss work related problems with supervisor.	0.78	2.97	3.87	3.87
(13) apply proper safety procedures in work situation.	0.78	2.97	4.22	4.22
(14) be willing to do routine work.	0.78	2.97	5.25	5.25
(15) be able to work under pressure.	2.45	2.30	5.92	5.92
D. General Knowledge of the World of Work				
The entry-level employee should:				
(1) know how to apply and interview for a job.	1.59	2.30	2.52	4.41
(2) understand labor union membership.	*5.88***	2.30	7.63	3.03
(3) know how to discuss wages.	1.05	2.30	3.67	8.05
(4) understand employee benefits.	1.05	2.30	3.47	7.20
(5) understand problems of industry or company management.	1.59	2.30	3.02	3.04

*Significantly greater importance was given by employers.

**Significantly greater importance was given by teachers.

***Significantly greater importance was given by graduates.

#Significant responses were by garment manufacturers and graduates employed in garment manufacturing.

Items left blank had insufficient distinct observations to do a chi square table.

APPENDIX F

THE DEGREE OF IMPORTANCE GIVEN ENTRY-LEVEL COMPETENCIES IN FREQUENCY AND PERCENT BY INDUSTRIAL SEWING EMPLOYERS, TEACHERS, AND GRADUATES

TABLE XXIII

THE DEGREE OF IMPORTANCE GIVEN ENTRY-LEVEL COMPETENCIES
BY EIGHT INDUSTRIAL SEWING EMPLOYERS

Competency Number	Essential		Some Advantage		No Advantage	
	N	%	N	%	N	%
A. Working Competencies						
The entry-level employee should be able to:						
(1) identify color shades.	7	87.5	1	12.5		
(2) color shade bolts of cloth.	1	12.5	3	37.5	4	50
(3) lay fabric by hand or with spreading machine.			4	50	4	50
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.			5	62.5	3	37.5
(5) cut individual garments by hand.			4	50	4	50
(6) sort cut parts and tie them into bundles.			6	75	2	25
(7) distribute bundles of garment parts and supplies to production workers.			8	100		
(8) mark location points on garment parts			7	87.5	1	12.5
(9) use conventional type sewing machine.	5	62.5	3	37.5		
(10) use a power machine.	7	87.5	1	12.5		
(11) organize work space and equipment.	1	12.5	2	25	5	62.5
(12) recognize machine problems.	2	25	6	75		
(13) do minor machine repair, replace needles, etc.	3	37.5	5	62.5		
(14) adjust machines, stitching, etc.	2	25	5	62.5	1	12.5
(15) use equipment and attachments.	2	25	6	75		
(16) read instruction manuals.			3	37.5	5	62.5
(17) perform various construction techniques, seam finishes, etc.	2	25	6	75		
(18) set zippers in garments.	2	25	2	25	4	50
(19) apply buttons, snaps, and other fasteners.	2	25	3	37.5	3	37.5
(20) use correct measuring techniques.	7	87.5			1	12.5

TABLE XXIII (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
A. Working Competencies						
The entry-level employee should be able to:						
(21) repair imperfect work.	7	87.5	1	12.5		
(22) demonstrate manual dexterity.	8	100				
(23) hand sew buttons, hems, linings, finishing details.			5	62.5	3	37.5
(24) use correct pressing techniques with steam pressing machine and/or hand iron.	1	12.5	3	37.5	4	50
(25) fold, pin, bag, tag, and box finished garments for shipping.			6	75	2	25
B. Related Knowledge						
The entry-level employee should:						
(1) understand terminology specific to industrial sewing.	5	62.5	3	37.5		
(2) have a working knowledge of fabrics.	3	37.5	4	50	1	12.5
(3) have a working knowledge of threads.	3	37.5	5	62.5		
(4) understand marking procedures.	5	62.5	3	37.5		
(5) recognize good quality work, seams, etc.	5	62.5	3	37.5		
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(1) be able to do good quality work.	8	100				
(2) be able to do a specified quantity of work.	8	100				
(3) cooperate with fellow workers.	6	75	2	25		
(4) accept supervision.	8	100				
(5) listen to and follow instructions.	8	100				
(6) be dependable.	8	100				
(7) have regular attendance.	8	100				
(8) have initiative.	7	87.5	1	12.5		

TABLE XXIII (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(9) be prompt.	8	100				
(10) have an acceptable personal appearance.	2	25	6	75		
(11) adapt quickly to new situations.	7	87.5	1	12.5		
(12) be able to discuss work related problems with supervisor.	8	100				
(13) apply proper safety procedures in work situation.	8	100				
(14) be willing to do routine work.	8	100				
(15) be able to work under pressure.	7	87.5	1	12.5		
D. General Knowledge of the World of Work						
The entry-level employee should:						
(1) know how to apply and interview for a job.	7	87.5	1	12.5		
(2) understand labor union membership.	2	25	6	75		
(3) know how to discuss wages.	1	12.5	7	87.5		
(4) understand employee benefits.	1	12.5	7	87.5		
(5) understand problems of industry or company management.	2	25	6	75		

TABLE XXIV

THE DEGREE OF IMPORTANCE GIVEN ENTRY-LEVEL COMPETENCIES BY SEVEN INDUSTRIAL SEWING TEACHERS

Competency Number	Essential		Some Advantage		No Advantage	
	N	%	N	%	N	%
A. Working Competencies						
The entry-level employee should be able to:						
(1) identify color shades.	5	71.4	1	14.3	1	14.3
(2) color shade bolts of cloth.	4	57.1	2	28.6	1	14.3
(3) lay fabric by hand or with spreading machine.	2	28.6	3	42.8	2	28.6
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.	1	14.3	3	42.8	3	42.8
(5) cut individual garments by hand.	3	42.8	2	28.6	2	28.6
(6) sort cut parts and tie them into bundles.			4	57.1	3	42.8
(7) distribute bundles of garment parts and supplies to production workers.			4	57.1	3	42.8
(8) mark location points on garment parts.	4	57.1	2	28.6	1	14.3
(9) use conventional type sewing machine.	3	42.8	1	14.3	3	42.8
(10) use a power machine.	6	85.7	1	14.3		
(11) organize work space and equipment.	6	85.7	1	14.3		
(12) recognize machine problems.	6	85.7	1	14.3		
(13) do minor machine repair, replace needles, etc.	6	85.7	1	14.3		
(14) adjust machines, stitching, etc.	7	100				
(15) use equipment and attachments.	5	71.4	2	28.6		
(16) read instruction manuals.	5	71.4	1	14.3	1	14.3
(17) perform various construction techniques, seam finishes, etc.	6	85.7	1	14.3		
(18) set zippers in garments.	5	71.4			2	28.6
(19) apply buttons, snaps, and other fasteners.	5	71.4			2	28.6
(20) use correct measuring techniques.	6	85.7	1	14.3		
(21) repair imperfect work.	7	100				

TABLE XXIV (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
A. Working Competencies						
The entry-level employee should be able to:						
(22) demonstrate manual dexterity.	7	100				
(23) hand sew buttons, hems, linings, finishing details.	5	71.4			2	28.6
(24) use correct pressing techniques with steam pressing machine and/or hand iron.	4	57.1	1	14.3	2	28.6
(25) fold, pin, bag, tag, and box finished garments for shipping.	2	28.6	2	28.6	3	42.8
B. Related Knowledge						
The entry-level employee should:						
(1) understand terminology specific to industrial sewing.	3	42.8	4	57.1		
(2) have a working knowledge of fabrics.	6	85.7	1	14.3		
(3) have a working knowledge of threads.	6	85.7	1	14.3		
(4) understand marking procedures.	7	100				
(5) recognize good quality work, seams, etc.	7	100				
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(1) be able to do good quality work.	6	85.7	1	14.3		
(2) be able to do a specified quantity of work.	5	71.4	2	28.6		
(3) cooperate with fellow workers.	6	85.7	1	14.3		
(4) accept supervision.	7	100				
(5) listen to and follow instructions.	7	100				
(6) be dependable.	7	100				
(7) have regular attendance.	7	100				
(8) have initiative.	7	100				
(9) be prompt.	7	100				
(10) have an acceptable personal appearance.	6	85.7	1	14.3		

TABLE XXIV (Continued)

Competency Number	Essential		Some Advantage		No Advantage	
	N	%	N	%	N	%
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(11) adapt quickly to new situations.	6	85.7	1	14.3		
(12) be able to discuss work related problems with supervisor.	6	85.7	1	14.3		
(13) apply proper safety procedures in work situation.	6	85.7	1	14.3		
(14) be willing to do routine work.	6	85.7	1	14.3		
(15) be able to work under pressure.	5	71.4	2	28.6		
D. General Knowledge of the World of Work						
The entry-level employee should:						
(1) know how to apply and interview for a job.	7	100				
(2) understand labor union membership.	2	28.6	2	28.6	3	42.8
(3) know how to discuss wages.	3	42.8	3	42.8	1	14.3
(4) understand employee benefits.	3	42.8	3	42.8	1	14.3
(5) understand problems of industry or company management.	3	42.8	4	57.1		

TABLE XXV

THE DEGREE OF IMPORTANCE GIVEN ENTRY-LEVEL COMPETENCIES
BY TWENTY-THREE INDUSTRIAL SEWING GRADUATES

Competency Number	Essential		Some Advantage		No Advantage	
	N	%	N	%	N	%
A. Working Competencies						
The entry-level employee should be able to:						
(1) identify color shades.	4	17.4	14	60.9	5	21.7
(2) color shade bolts of cloth.	2	8.7	14	60.9	7	30.4
(3) lay fabric by hand or with spreading machine.	4	17.4	7	30.4	12	52.2
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.	2	8.7	8	34.8	13	56.5
(5) cut individual garments by hand.	2	8.7	6	26.1	15	65.2
(6) sort cut parts and tie them into bundles.	5	21.7	13	56.5	5	21.7
(7) distribute bundles of garment parts and supplies to production workers.	3	13	13	56.5	7	30.4
(8) mark location points on garment parts.	7	30.4	9	39.1	7	30.4
(9) use conventional type sewing machine	10	43.5	11	47.8	2	8.7
(10) use a power machine.	20	87	3	13		
(11) organize work space and equipment.	4	17.4	9	39.1	10	43.5
(12) recognize machine problems.	7	30.4	15	65.2	1	4.3
(13) do minor machine repair, replace needles, etc.	15	65.2	7	30.4	1	4.3
(14) adjust machines, stitching, etc.	10	43.5	13	56.5		
(15) use equipment and attachments.	6	26.1	11	47.8	6	26.1
(16) read instruction manuals.	1	4.3	12	52.2	10	43.5
(17) perform various construction techniques, seam finishes, etc.	9	39.1	10	43.5	4	17.4
(18) set zippers in garments.	7	30.4	8	34.8	8	34.8
(19) apply buttons, snaps, and other fasteners.	6	26.1	12	52.2	5	21.7
(20) use correct measuring techniques.	14	60.9	7	30.4	2	8.7
(21) repair imperfect work.	17	73.9	3	13	3	13

TABLE XXV (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
A. Working Competencies						
The entry-level employee should be able to:						
(22) demonstrate manual dexterity.	12	52.2	6	26.1	5	21.7
(23) hand sew buttons, hems, linings, finishing details.	4	17.4	8	34.8	11	47.8
(24) use correct pressing techniques with steam pressing machine and/or hand iron.	4	17.4	10	43.5	9	39.1
(25) fold, pin, bag, tag, and box finished garments for shipping.	2	8.7	13	56.5	8	34.8
B. Related Knowledge						
The entry-level employee should:						
(1) understand terminology specific to industrial sewing.	13	56.5	9	39.1	1	4.3
(2) have a working knowledge of fabrics.	12	52.2	7	30.4	4	17.4
(3) have a working knowledge of threads.	13	56.5	8	34.8	2	8.7
(4) understand marking procedures.	18	78.3	4	17.4	1	4.3
(5) recognize good quality work, seams, etc.	21	91.3	1	4.3	1	4.3
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(1) be able to do good quality work.	20	87	3	13		
(2) be able to do a specified quantity of work.	17	73.9	6	26.1		
(3) cooperate with fellow workers.	10	43.5	13	56.5		
(4) accept supervision.	20	87	2	8.7	1	4.3
(5) listen to and follow instructions.	21	91.3	1	4.3	1	4.3
(6) be dependable.	19	82.6	3	13	1	4.3
(7) have regular attendance.	20	87	2	8.7	1	4.3
(8) have initiative.	11	47.8	11	47.8	1	4.3
(9) be prompt.	21	91.3	1	4.3	1	4.3
(10) have an acceptable personal appearance.	5	21.7	17	73.9	1	4.3

TABLE XXV (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(11) adapt quickly to new situations.	11	47.8	10	43.5	2	8.7
(12) be able to discuss work related problems with supervisor.	8	36.4	13	59.1	1	4.3
(13) apply proper safety procedures in work situation.	18	81.8	3	13.6	1	4.3
(14) be willing to do routine work.	15	68.2	6	27.3	1	4.3
(15) be able to work under pressure.	14	63.6	6	27.3	2	9.1
D. General Knowledge of the World of Work						
The entry-level employee should:						
(1) know how to apply and interview for a job.	18	78.3	3	13	2	8.7
(2) understand labor union membership.	7	30.4	14	60.9	2	8.7
(3) know how to discuss wages.	8	34.8	13	56.5	2	8.7
(4) understand employee benefits.	7	30.4	14	60.9	2	8.7
(5) understand problems of industry or company management.	4	17.4	17	73.9	2	8.7

APPENDIX G

THE DEGREE OF IMPORTANCE GIVEN ENTRY-LEVEL COMPETENCIES IN INDUSTRIAL SEWING IN FREQUENCY AND PERCENT BY EMPLOYERS AND GRADUATES IN GARMENT, SHOE, AND TOY MANUFACTURING

TABLE XXVI

THE DEGREE OF IMPORTANCE GIVEN ENTRY-LEVEL COMPETENCIES IN INDUSTRIAL SEWING BY FOUR GARMENT MANUFACTURERS

Competency Number	Essential		Some Advantage		No Advantage	
	N	%	N	%	N	%
A. Working Competencies						
The entry-level employee should be able to:						
(1) identify color shades.	4	100				
(2) color shade bolts of cloth.	1	25	3	75		
(3) lay fabric by hand or with spreading machine.			3	75	1	25
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.			3	75	1	25
(5) cut individual garments by hand.			3	75	1	25
(6) sort cut parts and tie them into bundles.			4	100		
(7) distribute bundles of garment parts and supplies to production workers.			4	100		
(8) mark location points on garment parts.			3	75	1	25
(9) use conventional type sewing machine.	1	25	3	75		
(10) use a power machine.	3	75	1	25		
(11) organize work space and equipment.			1	25	3	75
(12) recognize machine problems.			4	100		
(13) do minor machine repair, replace needles, etc.			4	100		
(14) adjust machines, stitching, etc.			3	75	1	25
(15) use equipment and attachments.			4	100		
(16) read instruction manuals.			2	50	2	50
(17) perform various construction techniques, seam finishes, etc.	2	50	2	50		
(18) set zippers in garments.	2	50	2	50		
(19) apply buttons, snaps, and other fasteners.	2	50	2	50		
(20) use correct measuring techniques.	4	100				
(21) repair imperfect work.	3	75	1	25		

TABLE XXVI (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
A. Working Competencies						
The entry-level employee should be able to:						
(22) demonstrate manual dexterity.	4	100				
(23) hand sew buttons, hems, linings, finishing details.			3	75	1	25
(24) use correct pressing techniques with steam pressing machine and/or hand iron.	1	25	3	75		
(25) fold, pin, bag, tag, and box finished garments for shipping.			4	100		
B. Related Knowledge						
The entry-level employee should:						
(1) understand terminology specific to industrial sewing.	2	50	2	50		
(2) have a working knowledge of fabrics.	2	50	2	50		
(3) have a working knowledge of threads.	2	50	2	50		
(4) understand marking procedures.	2	50	2	50		
(5) recognize good quality work, seams, etc.	2	50	2	50		
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(1) be able to do good quality work.	4	100				
(2) be able to do a specified quantity of work.	4	100				
(3) cooperate with fellow workers.	3	75	1	25		
(4) accept supervision.	4	100				
(5) listen to and follow instructions.	4	100				
(6) be dependable.	4	100				
(7) have regular attendance.	4	100				
(8) have initiative.	3	75	1	25		
(9) be prompt.	4	100				
(10) have an acceptable personal appearance.	1	25	3	75		

TABLE XXVI (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(11) adapt quickly to new situations.	3	75	1	25		
(12) be able to discuss work related problems with supervisor.	4	100				
(13) apply proper safety procedures in work situation.	4	100				
(14) be willing to do routine work.	4	100				
(15) be able to work under pressure.	3	75	1	25		
D. General Knowledge of the World of Work						
The entry-level employee should:						
(1) know how to apply and interview for a job.	3	75	1	25		
(2) understand labor union membership.	1	25	3	75		
(3) know how to discuss wages.			4	100		
(4) understand employee benefits.			4	100		
(5) understand problems of industry or company management.	1	25	3	75		

TABLE XXVII

THE DEGREE OF IMPORTANCE GIVEN ENTRY-LEVEL COMPETENCIES IN INDUSTRIAL SEWING BY TWELVE GRADUATES WHO HAD BEEN EMPLOYED IN GARMENT MANUFACTURING

Competency Number	Essential		Some Advantage		No Advantage	
	N	%	N	%	N	%
A. Working Competencies						
The entry-level employee should be able to:						
(1) identify color shades.	3	25	8	67	1	8
(2) color shade bolts of cloth.	1	8	8	67	3	25
(3) lay fabric by hand or with spreading machine.			5	42	7	58
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.			5	42	7	58
(5) cut individual garments by hand.			4	33	8	67
(6) sort cut parts and tie them into bundles.	3	25	8	67	1	8
(7) distribute bundles of garment parts and supplies to production workers.	1	8	10	84	1	8
(8) mark location points on garment parts.	2	17	7	58	3	25
(9) use conventional type sewing machine.	5	42	6	50	1	8
(10) use a power machine.	10	83	2	17		
(11) organize work space and equipment.	1	8	5	42	6	50
(12) recognize machine problems.	3	25	8	67	1	8
(13) do minor machine repair, replace needles, etc.	8	67	4	33		
(14) adjust machines, stitching, etc.	4	33	8	67		
(15) use equipment and attachments.	2	17	7	58	3	25
(16) read instruction manuals.			7	58	5	42
(17) perform various construction techniques, seam finishes, etc.	3	25	9	75		
(18) set zippers in garments.	2	17	8	66	2	17
(19) apply buttons, snaps, and other fasteners.	2	17	10	83		
(20) use correct measuring techniques.	6	50	5	42	1	8

TABLE XXVII (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
A. Working Competencies						
The entry-level employee should be able to:						
(21) repair imperfect work.	8	67	3	25	1	8
(22) demonstrate manual dexterity.	4	33	5	42	3	25
(23) hand sew buttons, hems, linings, finishing details.	1	8	7	58	4	33
(24) use correct pressing techniques with steam pressing machine and/or hand iron.	2	17	8	66	2	17
(25) fold, pin, bag, tag, and box finished garments for shipping.	1	8	8	66	3	25
B. Related Knowledge						
The entry-level employee should:						
(1) understand terminology specific to industrial sewing.	5	42	7	58		
(2) have a working knowledge of fabrics.	7	58	3	25	2	17
(3) have a working knowledge of threads.	8	66	3	25	1	8
(4) understand marking procedures.	9	75	3	25		
(5) recognize good quality work, seams, etc.	11	92	1	8		
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(1) be able to do good quality work.	11	92	1	8		
(2) be able to do a specified quantity of work.	9	75	3	25		
(3) cooperate with fellow workers.	4	33	8	67		
(4) accept supervision.	10	83	2	17		
(5) listen to and follow instructions.	11	92	1	8		
(6) be dependable.	10	83	2	17		
(7) have regular attendance.	11	92	1	8		
(8) have initiative.	5	42	7	58		
(9) be prompt.	11	92	1	8		

TABLE XXVII (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(10) have an acceptable personal appearance.	2	17	10	83		
(11) adapt quickly to new situations.	5	42	7	58		
(12) be able to discuss work related problems with supervisor.	4	33	8	67		
(13) apply proper safety procedures in work situation.	10	83	2	17		
(14) be willing to do routine work.	8	67	4	33		
(15) be able to work under pressure.	7	58	5	42		
D. General Knowledge of the World of Work						
The entry-level employee should:						
(1) know how to apply and interview for a job.	11	92	1	8		
(2) understand labor union membership.	3	25	9	75		
(3) know how to discuss wages.	2	17	10	83		
(4) understand employee benefits.	2	17	10	83		
(5) understand problems of industry or company management.	2	17	10	83		

TABLE XXVIII

THE DEGREE OF IMPORTANCE GIVEN ENTRY-LEVEL COMPETENCIES IN INDUSTRIAL SEWING BY TWO SHOE MANUFACTURERS

Competency Number	Essential		Some Advantage		No Advantage	
	N	%	N	%	N	%
A. Working Competencies						
The entry-level employee should be able to:						
(1) identify color shades.	2	100				
(2) color shade bolts of cloth					2	100
(3) lay fabric by hand or with spreading machine.					2	100
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.			1	50	1	50
(5) cut individual garments by hand.					2	100
(6) sort cut parts and tie them into bundles.					2	100
(7) distribute bundles of garment parts and supplies to production workers.			2	100		
(8) mark location points on garment parts.			2	100		
(9) use conventional type sewing machine.	2	100				
(10) use a power machine.	2	100				
(11) organize work space and equipment.	1	50	1	50		
(12) recognize machine problems.	2	100				
(13) do minor machine repair, replace needles, etc.	2	100				
(14) adjust machines, stitching, etc.	2	100				
(15) use equipment and attachments.	2	100				
(16) read instruction manuals.			1	50	1	50
(17) perform various construction techniques, seam finishes, etc.			2	100		
(18) set zippers in garments.					2	100
(19) apply buttons, snaps, and other fasteners.					2	100
(20) use correct measuring techniques.	1	50			1	50
(21) repair imperfect work.	2	100				

TABLE XXVIII (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
A. Working Competencies						
The entry-level employee should be able to:						
(22) demonstrate manual dexterity.	2	100				
(23) hand sew buttons, hems, linings, finishing details.					2	100
(24) use correct pressing techniques with steam pressing machine and/or hand iron.					2	100
(25) fold, pin, bag, tag, and box finished garments for shipping.					2	100
B. Related Knowledge						
The entry-level employee should:						
(1) understand terminology specific to industrial sewing.	1	50	1	50		
(2) have a working knowledge of fabrics.			1	50	1	50
(3) have a working knowledge of threads.			2	100		
(4) understand marking procedures.	1	50	1	50		
(5) recognize good quality work, seams, etc.	2	100				
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(1) be able to do good quality work.	2	100				
(2) be able to do a specified quantity of work.	2	100				
(3) cooperate with fellow workers.	2	100				
(4) accept supervision.	2	100				
(5) listen to and follow instructions.	2	100				
(6) be dependable.	2	100				
(7) have regular attendance.	2	100				
(8) have initiative.	2	100				
(9) be prompt.	2	100				
(10) have an acceptable personal appearance.	1	50	1	50		

TABLE XXVIII (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(11) adapt quickly to new situations	2	100				
(12) be able to discuss work related problems with supervisor.	2	100				
(13) apply proper safety procedures in work situation.	2	100				
(14) be willing to do routine work.	2	100				
(15) be able to work under pressure.	2	100				
D. General Knowledge of the World of Work						
The entry-level employee should:						
(1) know how to apply and interview for a job.	2	100				
(2) understand labor union membership.	1	50	1	50		
(3) know how to discuss wages.	1	50	1	50		
(4) understand employee benefits.	1	50	1	50		
(5) understand problems of industry or company management.			2	100		

TABLE XXIX

THE DEGREE OF IMPORTANCE GIVEN ENTRY-LEVEL COMPETENCIES IN INDUSTRIAL SEWING BY SIX GRADUATES WHO HAD BEEN EMPLOYED IN SHOE MANUFACTURING

Competency Number	Essential		Some Advantage		No Advantage	
	N	%	N	%	N	%
A. Working Competencies						
The entry-level employee should be able to:						
(1) identify color shades.			2	33	4	67
(2) color shade bolts of cloth	1	17	2	33	3	50
(3) lay fabric by hand or with spreading machine.	2	33			4	67
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.	2	33			4	67
(5) cut individual garments by hand.			1	17	5	83
(6) sort cut parts and tie them into bundles.	1	17	2	33	3	50
(7) distribute bundles of garment parts and supplies to production workers.	1	17	1	17	4	67
(8) mark location points on garment parts.	2	33	2	33	2	33
(9) use conventional type sewing machine.	2	33	4	67		
(10) use a power machine.	5	83	1	17		
(11) organize work space and equipment.	1	17	3	50	2	33
(12) recognize machine problems.	1	17	5	83		
(13) do minor machine repair, replace needles, etc.	3	50	3	50		
(14) adjust machines, stitching, etc.	2	33	4	67		
(15) use equipment and attachments.	1	17	3	50	2	33
(16) read instruction manuals.			3	50	3	50
(17) perform various construction techniques, seam finishes, etc.	2	33			4	67
(18) set zippers in garments.	1	17			5	83
(19) apply buttons, snaps, and other fasteners.	2	33			4	67
(20) use correct measuring techniques.	3	50	3	50		

TABLE XXIX (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
A. Working Competencies						
The entry-level employee should be able to:						
(21) repair imperfect work.	5	83			1	17
(22) demonstrate manual dexterity.	5	83			1	17
(23) hand sew buttons, hems, linings, finishing details.			1	17	5	83
(24) use correct pressing techniques with steam pressing machine and/or hand iron.	1	17			5	83
(25) fold, pin, bag, tag, and box finished garments for shipping.	1	17	2	33	3	50
B. Related Knowledge						
The entry-level employee should:						
(1) understand terminology specific to industrial sewing.	4	67	2	33		
(2) have a working knowledge of fabrics.	2	33	3	50	1	17
(3) have a working knowledge of threads.	2	33	4	67		
(4) understand marking procedures.	5	83	1	17		
(5) recognize good quality work, seams, etc.	5	83			1	17
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(1) be able to do good quality work.	4	67	2	33		
(2) be able to do a specified quantity of work.	4	67	2	33		
(3) cooperate with fellow workers.	3	50	3	50		
(4) accept supervision.	5	83			1	17
(5) listen to and follow instructions.	5	83			1	17
(6) be dependable.	5	83			1	17
(7) have regular attendance.	5	83			1	17
(8) have initiative.	3	50	2	33	1	17
(9) be prompt.	5	83			1	17

TABLE XXIX (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(10) have an acceptable personal appearance.	1	17	4	66	1	17
(11) adapt quickly to new situations.	4	67	1	17	1	17
(12) be able to discuss work related problems with supervisor.	3	50	2	33	1	17
(13) apply proper safety procedures in work situation.	5	83			1	17
(14) be willing to do routine work.	5	83			1	17
(15) be able to work under pressure.	5	83			1	17
D. General Knowledge of the World of Work						
The entry-level employee should:						
(1) know how to apply and interview for a job.	3	50	2	33	1	17
(2) understand labor union membership.	2	33	3	50	1	17
(3) know how to discuss wages.	3	50	2	33	1	17
(4) understand employee benefits.	3	50	2	33	1	17
(5) understand problems of industry or company management.	1	17	4	66	1	17

TABLE XXX

THE DEGREE OF IMPORTANCE GIVEN ENTRY-LEVEL COMPETENCIES IN INDUSTRIAL SEWING BY TWO TOY MANUFACTURERS

Competency Number	Essential		Some Advantage		No Advantage	
	N	%	N	%	N	%
A. Working Competencies						
The entry-level employee should be able to:						
(1) identify color shades.	1	50	1	50		
(2) color shade bolts of cloth.					2	100
(3) lay fabric by hand or with spreading machine.			1	50	1	50
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine			1	50	1	50
(5) cut individual garments by hand.			1	50	1	50
(6) sort cut parts and tie them into bundles.			2	100		
(7) distribute bundles of garment parts and supplies to production workers.			2	100		
(8) mark location points on garment parts.			2	100		
(9) use conventional type sewing machine.	2	100				
(10) use a power machine.	2	100				
(11) organize work space and equipment.					2	100
(12) recognize machine problems.			2	100		
(13) do minor machine repair, replace needles, etc.	1	50	1	50		
(14) adjust machines, stitchine, etc.			2	100		
(15) use equipment and attachments.			2	100		
(16) read instruction manuals.					2	100
(17) perform various construction techniques, seam finishes, etc.			2	100		
(18) set zippers in garments.			2	100		
(19) apply buttons, snaps, and other fasteners.			1	50	1	50
(20) use correct measuring techniques.	2	100				
(21) repair imperfect work.	2	100				

TABLE XXX (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
A. Working Competencies						
The entry-level employee should be able to:						
(22) demonstrate manual dexterity.	2	100				
(23) hand sew buttons, hems, linings, finishing details.			2	100		
(24) use correct pressing techniques with steam pressing machine and/or hand iron.					2	100
(25) fold, pin, bag, tag, and box finished garments for shipping.			2	100		
B. Related Knowledge						
The entry-level employee should:						
(1) understand terminology specific to industrial sewing.	2	100				
(2) have a working knowledge of fabrics.	1	50	1	50		
(3) have a working knowledge of threads.	1	50	1	50		
(4) understand marking procedures.	2	100				
(5) recognize good quality work, seams, etc.	1	50	1	50		
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(1) be able to do good quality work.	2	100				
(2) be able to do a specified quantity of work.	2	100				
(3) cooperate with fellow workers.	1	50	1	50		
(4) accept supervision.	2	100				
(5) listen to and follow instructions.	2	100				
(6) be dependable.	2	100				
(7) have regular attendance.	2	100				
(8) have initiative.	2	100				
(9) be prompt.	2	100				
(10) have an acceptable personal appearance.			2	100		

TABLE XXX (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(11) adapt quickly to new situations.	2	100				
(12) be able to discuss work related problems with supervisor.	2	100				
(13) apply proper safety procedures in work situation.	2	100				
(14) be willing to do routine work.	2	100				
(15) be able to work under pressure.	2	100				
D. General Knowledge of the World of Work						
The entry-level employee should:						
(1) know how to apply and interview for a job.	2	100				
(2) understand labor union membership.			2	100		
(3) know how to discuss wages.			2	100		
(4) understand employee benefits.			2	100		
(5) understand problems of industry or company management.	1	50	1	50		

TABLE XXXI

THE DEGREE OF IMPORTANCE GIVEN ENTRY-LEVEL COMPETENCIES IN INDUSTRIAL SEWING BY FIVE GRADUATES WHO HAD BEEN EMPLOYED IN TOY MANUFACTURING

Competency Number	Essential		Some Advantage		No Advantage	
	N	%	N	%	N	%
A. Working Competencies						
The entry-level employee should be able to:						
(1) identify color shades.	1	20	4	80		
(2) color shade bolts of cloth.			4	80	1	20
(3) lay fabric by hand or with spreading machine.	2	40	2	40	1	20
(4) cut parts of garments from layers of cloth with electric cutting machine and/or manual cutting machine.			3	60	2	40
(5) cut individual garments by hand.	2	40	1	20	2	40
(6) sort cut parts and tie them into bundles.	1	20	3	60	1	20
(7) distribute bundles of garment parts and supplies to production workers.	1	20	3	60	1	20
(8) mark location points on garment parts.	3	60	1	20	1	20
(9) use a conventional type sewing machine.	3	60	2	40		
(10) use a power machine.	5	100				
(11) organize work space and equipment.	2	40	1	20	2	40
(12) recognize machine problems.	3	60	2	40		
(13) do minor machine repair, replace needles, etc.	4	80			1	20
(14) adjust machines, stitching, etc.	4	80	1	20		
(15) use equipment and attachments.	3	60	1	20	1	20
(16) read instruction manuals.	1	20	2	40	2	40
(17) perform various construction techniques, seam finishes, etc.	4	80	1	20		
(18) set zippers in garments.	4	80			1	20
(19) apply buttons, snaps, and other fasteners.	2	40	2	40	1	20
(20) use correct measuring techniques.	4	80			1	20

TABLE XXXI (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
A. Working Competencies						
The entry-level employee should be able to:						
(21) repair imperfect work.	4	80			1	20
(22) demonstrate manual dexterity.	3	60	1	20	1	20
(23) hand sew buttons, hems, linings, finishing details.	3	60			2	40
(24) use correct pressing techniques with steam pressing machine and/or hand iron.	1	20	2	40	2	40
(25) fold, pin, bag, tag, and box finished garments for shipping.			3	60	2	40
B. Related Knowledge						
The entry-level employee should:						
(1) understand terminology specific to industrial sewing.	4	80			1	20
(2) have a working knowledge of fabrics.	3	60	1	20	1	20
(3) have a working knowledge of threads.	3	60	1	20	1	20
(4) understand marking procedures.	4	80			1	20
(5) recognize good quality work, seams, etc.	5	100				
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(1) be able to do good quality work.	5	100				
(2) be able to do a specified quantity of work.	4	80	1	20		
(3) cooperate with fellow workers.	3	60	2	40		
(4) accept supervision.	5	100				
(5) listen to and follow instructions.	5	100				
(6) be dependable.	4	80	1	20		
(7) have regular attendance.	4	80	1	20		
(8) have initiative.	3	60	2	40		
(9) be prompt.	5	100				

TABLE XXXI (Continued)

Competency Number	Essential N	Essential %	Some Advantage N	Some Advantage %	No Advantage N	No Advantage %
C. Personal Work Habits and Attitudes						
The entry-level employee should:						
(10) have an acceptable personal appearance.	2	40	3	60		
(11) adapt quickly to new situations.	2	40	2	40	1	20
(12) be able to discuss work related problems with supervisor.	2	40	3	60		
(13) apply proper safety procedures in work situation.	4	80	1	20		
(14) be willing to do routine work.	3	60	2	40		
(15) be able to work under pressure.	3	60	1	20	1	20
D. General Knowledge of the World of Work						
The entry-level employee should:						
(1) know how to apply and interview for a job.	4	80			1	20
(2) understand labor union membership.	2	40	2	40	1	20
(3) know how to discuss wages.	3	60	1	20	1	20
(4) understand employee benefits.	2	40	2	40	1	20
(5) understand problems of industry or compnay management.	1	20	3	60	1	20

VITA

Joyce Jean Waldron

Candidate for the Degree of

Doctor of Education

Thesis: ENTRY-LEVEL COMPETENCIES IN CLOTHING RELATED CAREERS NEEDED BY GRADUATES OF SECONDARY OCCUPATIONAL PROGRAMS AND AREA VOCATIONAL SCHOOLS IN MISSOURI

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