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THE DEVELOPMENT OF CONCEPT FILMS FOR A  
CLOTHING CONSTRUCTION UNIT IN NINTH  
GRADE HOME ECONOMICS

By

ELOUISE FRUDY SCHEIRMAN

Bachelor of Science

Oklahoma State University

Stillwater, Oklahoma

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Thesis Approved:

*Elaine Jorgensen*

Thesis Adviser

*Elizabeth C. Hillier*

*Lara Cacy*

*N. Blurham*

Dean of the Graduate College

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## CHAPTER I

### INTRODUCTION

In the vocational homemaking program in Oklahoma there are many areas to teach and a very limited time in which to do it, therefore it is important that the most efficient methods of teaching be used. The area of clothing construction can be very time consuming in a beginning class since many new skills are involved and each student must learn to do them. It seems then that clothing construction for beginners is a logical place for new methods and techniques to be utilized.

During the 1960's, the use of audiovisual aids was promoted to help the teacher do a better teaching job in a shorter time. Many of these have been utilized on a wide scale and do offer help. However, time to learn to utilize these aids and funds to purchase them seem to be problems. Federal aid through the Title III program has helped many schools to acquire and use audiovisual equipment, but the films, equipment and supplies are often not available to smaller school systems.

In education today there is much discussion of multimedia presentations and how to select specific media to do the best possible job of communication in a specific situation. Often the need could be met with a short film to treat a skill or "how-to-do-it" operation, called a concept film, according to Kemp and Szumski (October, 1968).

In the past few years a number of single concept films have been placed on the market. The 1971-72 Silent Film Loop Source Directory of



loops in instant loading Magi-cartridges listed 181 films under the heading of clothing and dress. Most of these were available for Super-8 projection. The 1968 directory had only 62 films listed under the same headings. Kemp and Szumski (October, 1968) offer some advice about these films.

The quality and value of these films vary greatly. Many are true single concept treatments and excellent teaching resources. Unfortunately, others are not. The latter ones may not be related to usual curriculum topics, may treat too many concepts, require sound when the silent medium is used, or may be of poor technical quality.

You must judge the adequacy of such commercial materials for yourself. If they do not fit properly into your instructional pattern then produce your own.

Eight mm film was used for many years by the amateur photographer, but in 1965 Eastman Kodak Company introduced Super-8. Compared to Standard-8, Super-8 has about a 50 percent larger picture area. This was accomplished by changing the shape and reducing the size of the sprocket holes. Because of this larger picture area, the projected image from Super-8 is sharper and brighter than Standard-8 and can be used satisfactorily for class or group viewing. Gradually Super-8 has replaced Standard-8 on dealers' shelves, as have the simple magazine-loading cameras replaced those using reels (Kemp and Szumski, July, 1968).

To use these concept films, a method of projection must be selected. As yet there is no type of projector that is standard. Films are projected from a roll or cartridge. Each brand of projector uses its own form and they are not interchangeable. It is possible to have sound on these films and there are two types available--the optical and the magnetic sound tracks. In subject matter that is predominantly visual in nature, a message carried through the sense of sight is most

effective and sound is not needed (Kemp and Szumski, October, 1968).

In research (Jackson, 1968) (Short, January, 1969) that has been done on concept films in vocational classes, it has been found that they are very useful for a number of purposes. They can be viewed by the class or by an individual student until he understands the material presented. They can be used as a re-enforcement device, to review or make up a lesson, or for independent study. Self-made films allow the instructor to present what he wants to present in the manner he wants to present it. Commercial ones may not be entirely suitable for use because of the various methods and techniques used for the same process and because of the great variety of kinds and models of equipment used. Some of these films originally appeared as 16mm and may be older than the catalog listings may seem to indicate, according to the foreword in the National Information Center for Educational Media's 1969 catalog.

#### Statement of the Problem

The main emphasis of this study was to develop and evaluate the use of three concept films which could be used for individualized instruction to enrich a beginning clothing construction unit at the secondary school level. Concepts to be covered were tapered darts, staystitching, and a lapped zipper application as used on an A-line skirt.

The objectives of this study were:

1. To become aware of the types of educational media available for individualized instruction in clothing construction.
2. To examine some of the commercial concept films which are available.

3. To choose selected concepts included in a beginning clothing construction unit which could be taught by concept films.
4. To develop some concept films which could be used for individualized instruction for beginning clothing construction students.
5. To evaluate the student learning by comparison of pretest and posttest scores of objective tests and to evaluate performance after viewing the films.
6. To obtain an indication of student interest in this method of learning.

#### Procedure

The writer reviewed literature on characteristics of learners, individualizing instruction, 8mm concept films, and evaluation. Film loop catalogs were researched to locate companies producing clothing construction films. Catalogs and other information were obtained from these companies, and film loops were previewed from three of them.

Concepts were selected from a beginning clothing construction unit for use in three films. Objectives for the three films were developed. The films were planned, made, and used. Pretests and posttests were developed to cover objectives of each film. A performance test was also developed for each film. The learnings were evaluated by studying pretest and posttest results and examining performance test results. Student interest was evaluated by getting written comments on this method of learning and by teacher observation.

### Limitations of the Study

1. The study was limited to researching media which could be used in a traditional 55-minute class session.
2. Materials developed were for the ninth grade students who have had no previous classroom training in clothing construction.
3. The development and use of materials were limited to the less expensive forms because of the limited finances available to the local homemaking department.
4. Sewing methods selected for use in these materials were those preferred by the writer and which will utilize equipment which is available in the Tonkawa Vocational Homemaking Department.
5. Subject matter of the concept films was limited to three problems encountered when making an A-line skirt.
6. The media used was Super-8 movie film, placed in Technicolor Magi-cartridges.

### Definition of Terms

Individualized Instruction is a program of instruction tailored to each student's learning needs based on his competencies and his characteristics as a learner. Students are actively involved in the learning process and each student progresses at his own rate (Fleck, 1971).

Super-8 is a form of 8mm film introduced by Eastman Kodak in 1965. It has about 50 percent larger picture area and its projected image is sharper and brighter than Standard-8 (Kemp and Szumski, July, 1968).

Concept Film is a short motion picture (1 to 4 minutes) which is designed to teach only one concept. It is also called a single concept or loop film (Kemp and Szumski, October, 1968).

Independent Study is supervised study that gives the student maximum freedom and a minimum of teacher guidance. It is less structured and greater responsibility is placed on the student than in individualized study (Fleck, 1971).

### Organization of the Study

The report of this study is organized into five chapters. Chapter I presents the introduction of the use of concept films, the statement of the problem, objectives of the study, procedure, limitations, definition of terms, and the organization of the study.

A review of the literature is contained in Chapter II pertaining to characteristics of learners, individualized instruction methods, 8mm concept films, and evaluation in home economics. Chapter III contains the selection of the media, the selection of the sample, the objectives of the clothing construction unit, and the development and use of staystitching, dart, and zipper films along with a summary of the procedure.

An analysis of the data in Chapter IV relates the procedure used, analysis of pretests and posttests on staystitching, darts, and zippers, student indication of interest in the method, and a summary of the chapter. Chapter V contains the summary, conclusions, and recommendations.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

Literature related to the teaching of clothing construction reveals an abundance of media being used, one of the newest being concept films. The use of concept films facilitates individualization of instruction. A review of the characteristics of learners, individualized instruction, development and use of 8mm single concept films, and information about evaluation in home economics follows.

#### Characteristics of Learners

Understanding students is necessary to be a successful teacher. The needs, interests, problems, attitudes, and behavior of young people must be considered. There is a pattern of development expected of individuals at certain periods of growth. Successful achievement of these brings personal happiness and social approval (Hatcher and Andrews, 1963). All of the basic books for preparation of homemaking teachers or for curriculum development refer to these as developmental tasks. They are based on Havinghurst's (1952) Developmental Tasks of Adolescence.

Hall and Paolucci (1961) say that a study of developmental characteristics gives cues for effective teaching. Some of the developmental characteristics of youth significant to the homemaking education program for middle adolescence (9th and 10th grade) they reported are:

More stable physical growth  
 Boys' growth equal to that of girls  
 Great craving for food, appearance of peculiar ideas about food  
 Less consciousness of body changes, better acceptance of these changes  
 Embarrassment over skin disorders  
 Tendency (in girls) to worry about certain physical conditions  
 Improved body coordination and posture  
 Strong desire (in both sexes) to be attractive, and to conform to group standards  
 Increased assumption of responsibility for maintaining good health  
 Greater interest in sports  
 Growing preoccupation with the social value of attractiveness  
 Resistance to parental control; growing assertion of independence  
 Impatience, in girls, with lack of skill in social situations; in boys, with mechanical failure in material things  
 Occasional dating; girls tend to date older boys  
 Increased desire to work at jobs that pay wages  
 Beginning of concern over adult problems  
 More social maturity in girls than in boys  
 Group feeling remains strong  
 Satisfaction taken in individual accomplishments that receive recognition of the group

These same kinds of characteristics are emphasized by Hatcher and Andrews (1963), who say that interest in personal appearance emerges during early adolescence, but becomes more pronounced as heterosexual attachments progress. There is a growing awareness of the part clothes play in being popular and socially acceptable. Clothes are one of girls' most important concerns.

Educators agree that the learning process involves mental and physiological changes. These changes result from the interaction of the individual with his environment, as he attempts to satisfy his needs, interests, or goals. In attempting to achieve his goals and to adjust to his environment a person learns (Hatcher and Andrews, 1963).

Repetition helps in the acquisition of knowledge and skills, but the amount necessary depends somewhat on the person's mental ability. Bright students require less repetition while slow learners need more

and often need to have the task broken down into parts (Hatcher and Andrews, 1963).

Much that is learned is forgotten. Students forget the most soon after learning. As time passes, the knowledge retained becomes smaller and smaller. At the end of one year one third to one half is forgotten. Those who learn most quickly retain more (Hatcher and Andrews, 1962).

The teacher can use certain procedures to help students toward better retention by remembering the following points emphasized by Hatcher and Andrews (1963).

- Learning involves whole situations, not isolated facts.
- The orderly arrangement of materials is essential.
- Covering a little ground thoroughly is better than covering much ground skimpily.
- Materials and skills that are reviewed occasionally will be better retained.
- Retention can be increased by encouraging students to continue using material and skills after a class goal is completed.

Fleck (1968) says, "The demands of the time require that home economics students learn more, learn faster, retain learning better, and apply it more effectively." To accomplish this the teacher needs to utilize modern learning theories.

Knowing and learning are different. Educators now believe that a student's behavior should be improved and changed as a result of knowing. Pupils must experience learning personally (Fleck, 1968).

An individual's needs may generate motivations. The development of the urge to explore stimulates motivation. In home economics, surroundings for exploration should be provided. In clothing construction, students can experiment with various methods, fabrics, and styles in attractive surroundings where suitable materials and equipment are provided. Opportunities should be provided for initiative and adventure, recognition and allowances of individual differences, and for



recognition of students' values, needs, interests, and goals (Fleck, 1968).

Fleck (1968) also says working in small groups brings about higher achievement for all students so should be encouraged, but the teacher should be a part of all groups by directing and observing group activity.

Learning is influenced by perception and by mental and physical health. Generalizations, principles, and concepts are retained to a greater degree than facts. Teachers must teach for transfer of learning and for building of good attitudes toward learning so students can solve their own problems (Fleck, 1968).

#### Individualized Instruction

Individualized instruction is designed to meet the individual capabilities of learners. The concepts of individualized instruction and individual study are not new, but have been receiving more attention in recent years. Increased enrollment, increased knowledge, and rapid development of teaching equipment have been some of the reasons prompting this growth. An array of innovations has dramatically expanded the teacher's capabilities in making this new kind of instruction possible (Edling, 1970).

Edling (1970) says only the "Early Adapters" have made the transition now, but that variations of the form of instruction will be widely adopted in the future. He bases his observations on the preliminary report of a nationwide study of individualized instructional programs. This study supported by the Research Utilization Branch, U. S. Office of Education, shows that there are hundreds of individualized

instructional programs now under way. The effects are impressive, particularly in terms of change in the behavior of learners and in a renewed interest in school and educational activities. Disciplinary problems have virtually disappeared. Teachers report working harder than before, but feel more satisfied because they feel that they are doing more for their students (Edling, 1970).

A few of the types of instruction Edling (1970) reported are:

The Continuous Progress Plan (CPP), a general plan which provides for the uninterrupted development of each child without restrictions as to materials or modes of instruction. The main objective is to provide each child with appropriate learning experiences. This plan has been associated with Edwin Reed of the University of Utah.

Contracts, Unipacs, Learning Activity Packages (LAPs), Performance Criteria Units, Teaching-Learning Units (TLUs), and various other names for instructional modules which usually contain (a) specific instructional objectives stated in behavioral terms, (b) information about how the behavior will be measured, and (c) a list of references to all instructional materials available to aid learners in developing the specified behavior (Edling, 1970). The American Home Economics Association is distributing some similar packages, HELPs--meaning Home Economics Learning Packages (Shear and Ray, 1969).

Individually Prescribed Instruction (IPI), a program of the Learning Research and Development Center of the University of Pittsburg and the Regional Educational Laboratory in Philadelphia. It contains (a) carefully sequenced and behaviorally stated objectives, (b) empirically developed materials which permit pupils to plan and proceed independently to learn prescribed behaviors, (c) provisions for

diagnosing and continually monitoring teacher diagnosis and (d) regular frequent feedback to learners.

Various other plans, many of which utilize some of the preceding characteristics but with variations, involve tutoring, studying only one subject at a time (full time for a nine-week period), centralization of resources, use of individual student carrels, and investigation and selection of careers (after finishing required course work as rapidly as their ability and dedication allow).

Most of these programs have been developed with extra money from grants. They were usually started by school administrators rather than classroom teachers. All media are being used in greater abundance with audio and print (except textbooks) providing primary support. There is a broadening of objectives and a great demand for instruments to measure changes in the learners, which have not been explicit objectives of traditional instruction.

Kapfer and Swenson (1968), directors with the Materials Dissemination Center, reported on Individualizing Instruction for Self-Paced Learning concerning progress toward the commitment to individualizing instruction. They felt that some progress has been made in providing a setting for individualizing instruction.

Flexible buildings, flexible schedules, and flexible teachers are necessary ingredients for individualizing instruction and for quality education, but they are not sufficient ingredients. The real deterrent to progress in individualizing instruction is caused by the lack of flexible curricula . . . . .

Individualizing instruction will increasingly cast the teacher in the role of a manager of learning for individual students. For such a role change to occur, teachers themselves must be involved in the change process. Involvement in the Materials Dissemination Center will facilitate such changes for improvement in the quality of the educational programs through individualized instruction. (Kapfer and Swenson, 1968)

The need for individualizing instruction is supported by Arthur Combs (1966), who says schools which do not produce self-directed citizens have failed everyone--the student, the profession, and the society they are designed to serve--because the goals of modern education cannot be achieved without self-direction. We have created a world in which there is no longer a common body of information which everyone must have. We have to help each student select what he most needs to fulfill his potentialities. This calls for student cooperation and acceptance of major responsibility for his own learning. To meet the demands of the future our nation must produce intelligent, independent people.

The effectiveness of learning must be measured by behavior change. To produce students who are more self-directed we must believe self-direction is important and actively work toward it. We must trust the human organism because it wants the same thing we do, the achievement of adequacy. Responsibility and self-direction are learned from experience. To produce independent self-starting people we must produce the kinds of experiences which will lead to these ends. We must have an experimental attitude and expect mistakes. Without trying and making mistakes, self-direction, creativity, and independence cannot be discovered. Self-direction does not have to be taught but just encouraged and set free to operate. Education must be seen not as providing right answers but as confrontation with real problems in which decisions count (Combs, 1966).

Individual teachers who have reported on their experiences with individual or independent study seem to support these educators. A student teacher in English tried it in a twelfth grade class on a

volunteer basis. Students selected topics which they wanted to pursue on their own and met with the teacher to set up goals and discuss their findings. She felt that she and the students learned and changed during the study. The biggest problems involved were time, availability of materials, and grading (Hardy, 1969).

In a study conducted in Hawaii, an advanced clothing course was scheduled as a part of an innovation in flexible scheduling and independent study during the 1966-67 school year. Students met once a week for group instruction and were scheduled for one laboratory period of one and a half hours each week. They were encouraged to work independently during their free modules. Students seemed to like the course taught in this way. It was recommended that the lecture sessions be shortened to forty minutes and that sewing machines should be modern, up-to-date models so that laboratory work can be accomplished with greater efficiency and less frustration (Sato, 1968).

Programmed instruction was found helpful in a seventh grade home-making class in Rhode Island, particularly for students classified as having lower reading and writing ability. Since motivation was a factor, the teacher used perky drawings of a girl, Saucy Sue, and other clever drawings to add interest to the programs which she developed. The instructor divided her program into three parts--(a) laboratory direction sheets, completely illustrated, (b) simple illustrated programmed material, and (c) non illustrated program material covering the same concepts, but more in depth. Students liked the pictures and showed complete absorption when using the programmed booklets. The author suggested that even though programs are not used, teachers can employ some of the practices which made programmed learning effective.

These are to establish objectives in a behavioral form, to develop techniques that permit the student to know immediately whether her response is correct, and to repeat materials in different forms, and permit students to study and work at their own pace (MacKenzie, 1969).

A method of teaching a clothing construction class by the programmed instruction method was reported by Shoffner and Clawson (1967). This program was written in a research project at the University of North Carolina. Accompanying the program is a series of panels to which the student is referred at various stages. These include pattern envelopes, guide sheets, pattern pieces and samples of construction processes. Students are instructed to check their work with the teacher at certain frames. This gives the teacher an opportunity to check each student's work during the class period. Evaluation showed that the achievement of the students taught by this method was superior to that of students in the control groups who had been taught by their teachers using traditional methods. The researchers who supervised the program were impressed with the purposeful activity in the classroom and with the effective use of time. This course was developed at the U. S. Office of Education, sponsored by the Singer Company and published by Ginn and Company (Shoffner and Clawson, 1967).

Fleck (1971) believes that the home economics curriculum may be broadened if some emphasis is placed on individualized instruction. She reported that independent study is considered less structured and places a greater responsibility on the student than individualized study according to some educators. She says one of the basic concepts related to this type of instruction is the recognition of individual differences in personal, intellectual and academic characteristics.

The objectives of a unit of study may be enrichment or remedial and should encourage exploration and discovery. Individualized instruction must be an integral part of the curriculum and a study program may arise within a unit. These studies may be shared with the entire class and evaluated (Fleck, 1971).

Fleck (1971) suggests the following procedure:

In preliminary planning a student may draft an outline of her project indicating ways that personal needs or problems will be met, behavioral objectives to be accomplished, procedures tentatively explored, resources available, methods of evaluation including progress reports. Teacher conferences, possible use of a paraprofessional, time schedule, equipment required, and places of work are other points that must be considered.

Many resources should be available to encourage and promote a variety of ways to learn. These should include audiovisual aids, books, pamphlets, magazines, journals, charts, posters, and pictures. A listening and viewing center should be included. Models, programmed materials, bulletin boards or other display areas, and mobile equipment are other possibilities (Fleck, 1971).

The space in the classroom must be flexible. There must be work and storage space. "The atmosphere must be permissive, encouraging, and challenging" (Fleck, 1971).

Many materials facilitate self-instruction. Cartridge loop films have been used successfully for learning skills in foods and clothing and for discussion problems. Filmstrips or slides are good for studying steps in laboratory activities, for presenting personal and social problems, home furnishing suggestions, types of houses, and stages of human development. Tapes may be used for collecting information from individuals. Real products may be selected for students to research.

Some of these could be done as homework and home experiences, which are a form of individualized instruction (Fleck, 1971).

Packages for individual learning include multimedia learning materials of various types so the student may choose the ways learning will take place. This allows for individual differences. Evaluation devices assist a student in determining her progress. Fleck (1971) suggested that packages should be examined carefully for the research base, the educational rationale, and the adequacy of materials. She says that while there is considerable literature about individualized instruction for a home economics teacher, definite steps must be taken in order to develop appropriate types of individualized instruction and to prepare the necessary study guides, packages, and teacher resources (Fleck, 1971).

#### Eight mm Single Concept Films

Eight mm motion picture films have been used since the 1920's. As films improved and as good and easy-to-operate projectors were developed, 8mm was used for many more purposes than the original home movies (Hemenway, 1968).

By the spring of 1965, industrial professionals were experimenting with 8mm. Most of them used either the Technicolor silent or the Fairchild sound cartridge projectors. Then Eastman Kodak announced Super-8. This new format offered 50 percent larger picture area and direct reduction from 16mm. A magnetic sound track could be put along the edge opposite the sprocket holes, too. It was expected that these films would be used to supplement textbooks and demonstrations, and that film would become as disposable as outdated or worn textbooks.



However, for the first year sales of this equipment did not increase. When manufacturers introduced projectors which would show either Regular-8 or Super-8, then the equipment began to sell (Hemenway, 1968).

Optical sound systems were soon developed. The Technicolor 1000, announced in 1967, was the first optical sound projector for professional use then available under \$300. A few months later Kodak announced the Ektagraphic Sound 8 projector, a Super-8 employing magnetic sound, costing less than \$200 (Hemenway, 1968).

A sizeable proportion of Technicolor and Kodak sales has come from the educational market. The Fairchild, which is more expensive and uses magnetic sound, is used mostly in the industrial and government markets. Technicolor holds the lead for the silent machines. No film packaged for one of these projectors can be shown in the other (Hemenway, 1968).

Producers of 8mm films for multiple release usually shoot in 16mm, and then have prints made in 8mm. Eight mm when used for additional prints usually makes a poor quality film. Camera-original 8mm film are good when only one print is needed and is usually used by the non-professional photographer. "Super-8 is now the standard-8mm format--regular-8 is the living fossil" (Hemenway, 1968).

Super-8 films can be used satisfactorily for class or group viewing, while Standard-8 should be used for small groups or individual viewing. Eight mm single concept films are ideal media for independent study, since at the proper time in an instructional sequence a student can view the film, and he can view it a number of times, if needed (Kemp and Szumski, October, 1968).

The length of these films may vary from a few seconds to several minutes (Kemp and Szumski, October, 1968). The maximum film which can be placed in one Magi-cartridge for use in the Technicolor projector is 55 foot, which runs for about four minutes.

A number of single concept films are available commercially. These may be found in the Silent (or Sound) Film Loop Source Directory available from Technicolor or in the Index to 8mm Cartridges published by the National Information Center for Educational Media.

According to Kemp and Szumski (October, 1968) the quality and value of these films vary greatly. The user must judge the adequacy of such commercial materials and if they do not fit properly into his instructional pattern, then his own may be produced. It is possible to add sound to films if special equipment for this purpose is available, to tape the sound, or to prepare written materials to go with films. However, a film may be most effective without sound, if the subject matter is predominantly visual in nature and requires motion only (Kemp and Szumski, October, 1968).

Some thoughtful planning should be done before shooting a film. For successful planning of a film a knowledge of subject matter and an acquaintance with the film medium and its potential uses in instruction are needed. Only a brief identifying title is needed to begin a concept film, and a short length of black leader makes a good ending (Kemp and Szumski, October, 1968). The basic steps in planning a film are to develop (1) the idea, (2) a statement of the objective, (3) the needs, characteristics, and background of the audience, (4) an outline of the subject content, (5) the treatment to be used, and (6) a storyboard. The storyboard will consist of simple sketches to show the sequence.

The script should have a description of content and an indication of the camera position (Kemp and Szumski, December, 1968).

If splices must be made, mylar tape should be used. Splices may be troublesome if the film is cartridged for use in a Technicolor projector. It is better to edit the film in the camera as it is taken. This is difficult, but can be accomplished with some practice (Kemp and Szumski, February, 1969).

The price for making a film varies depending upon the price of film and processing. The cartridging is \$1.55 when placed in Magi-cartridges for use in the Technicolor projector. The writer found the cost for a 50-foot film to be \$6.04 during the spring of 1972, if the film was purchased at a discount house and the finishing done by a mail processor in Oklahoma.

### Evaluation

A part of this study was to determine whether students learn from the use of concept films. Evaluation of this learning was done by the comparison of pretests and posttest. Objective and performance types of evaluation were used. Literature in the evaluation of home economics was reviewed from basic sources such as Arny, Fleck, and MacKenzie.

Fleck (1968) says evaluation means determining how well a teacher has been able to release the potential of her students, to what extent a class is achieving its goals, and the effectiveness of home economics in the curriculum. Evaluation is an attempt to answer the question "How well am I doing what I am trying to do?" (Fleck, 1968).

One of the major purposes of evaluation is to determine the extent to which objectives are being achieved. Before planning for evaluation,

goals must be determined. They should be outlined clearly, and the behavioral characteristics related to each goal stated. All ways for securing evidence of these behaviors should be explored. These will include observation, listening, using student records, and having individual conferences (Fleck, 1968).

Any evaluation device should be valid, reliable, and objective. Evaluation which measures what it is intended to measure is considered valid. The instrument must be accurate and be closely related to objectives of the group. The objectives should be significant to student development. The objectives and evaluation devices should also represent the same cognitive level of learning (MacKenzie, 1970).

Reliability is accuracy or preciseness with which a test measures whatever it does measure. If a device has inaccuracies and inconsistencies, it is not reliable. The device should be made up of homogeneous items, be of adequate length, and have clear test items. It should have many items of average difficulty, be at the appropriate reading level, and have good directions that can be understood by the learner (MacKenzie, 1970).

When different raters will give similar scores to a test, it is said to be objective. True-false, multiple-choice, and matching questions are examples of objective devices. To improve objectivity, the question must be stated in a precise manner, have only one correct answer, and have a key developed before the test is given (MacKenzie, 1970).

Objective tests tend to be exercises in recall. They are fairly easy to construct and take a short time to administer and score. They are limited in that it is impossible to tell if answers are based on

knowledge or guesswork. Multiple-choice tests are difficult to construct so that all responses are plausible. The first part of the multiple-choice question is a statement, incomplete sentence, or description. Multiple-choice answers can be used for identification or in reverse, where students cancel out inapplicable responses (Fleck, 1968).

Arny (1953) states that pretesting is necessary because unless present status is known, neither teachers nor students can see what changes need to be made nor what instruction should be given to bring about such changes. Since neither chronological age nor the amount of previous training indicates accurately the level of the student's knowledge or skill, pretesting can be helpful to home economics teachers.

Arny (1953) reported on the development of pretests for a clothing class because the teacher was concerned with the poor quality of garments being made in her classes. Pretesting was used to select basic skills which needed remedial work. After this instruction, the quality of the garment construction was much more satisfactory.

Performance tests are used to determine the ability of students to do a specific job. It is an exercise to measure skills. It may be used to diagnose difficulty, predict future success, motivate, or measure success. Performance tests may be recognition or work tests. The ability to recognize or identify is checked by a performance test. Work tests determine whether a student can perform a task or how well (Arny, 1953). She further states that a good performance test will meet these requirements:

Fundamental skills should be checked.  
Inexpensive materials should be used.  
The task should be complete within the class period.  
The results should be scorable in objective terms.  
The testing situation should represent one met in real life.

According to Fleck (1968) performance tests are frequently given so the teacher may gain some idea of a student's information, skill, and ability to apply what she has learned. She says that a simple construction project might help a teacher to determine certain clothing construction skills. Fleck (1968) ends a chapter on evaluation with the following statement, "Teachers must realize that evaluation of students goes on in the day-to-day teaching, and that it should be an integral part of, and contribute to, the comprehensive evaluation program of the entire school."

### Summary

The development and use of educational media has changed the teaching of home economics and all other disciplines. Development of simplified and inexpensive equipment has made a greater variety of media available to most teachers and its use permits her to individualize instruction to a greater extent.

The clothing construction area offers an opportunity for utilization of a variety of media with concept films being particularly appropriate. There are a number of concept films available commercially and they may be made by the classroom teacher as reported in the following section, Chapter III.

## CHAPTER III

### THE DEVELOPMENT AND USE OF THREE CONCEPT FILMS

The major emphasis of the study was to develop and use three concept films for a beginning clothing construction unit. Student learning from the films was evaluated through the use of written pretest and posttest and performance posttests. (A performance pretest was used for one film.) Student interest was observed by the teacher and student reaction to the teaching method was reported in writing by the students.

The writer became interested in this study when she attended a workshop on innovations in teaching clothing at Oklahoma State University during the summer of 1969. It was there she became acquainted with concept films and learned how to make one. Later, a review of the literature concerning individualized instruction and the media being utilized indicated that concept films could promote the learning of skills, such as those involved in learning to construct simple clothing articles.

After discussing the plan for utilizing concept films in this area with the local administrators, a Technicolor 810 projector was selected and purchased by the local school district. The writer had previously purchased a Kodak Instamatic Super-8 movie camera and projector.

A review of commercially prepared concept films available during the spring of 1971 showed a number of them on the market in the

clothing construction area. This was not true in 1969. Catalogs and materials about clothing films were obtained from ten companies. Forty film loops were obtained and previewed from three major American companies. Some of these were very good, but others did not utilize the method or equipment which the writer would prefer. Some of them are already out of date because of the equipment used. Prices of the ones previewed from major companies ranged from \$20 to \$23 each and some of them had to be purchased in sets of 24.

Even though it has been found that the self-made films will not be as technically perfect as commercial ones, they do have the advantage of showing the performance method preferred by the teacher, and in addition the cost is about \$6.00 for a 50-foot film. This includes the price of the film, processing, cartridging, and postage. To make them does involve owning or borrowing a camera, preparation of materials to be filmed, and the time in which to do it.

Since the writer had a special interest in improving her teaching methods for beginning clothing construction, the Homemaking I students were chosen for the sample. This class level is the first opportunity for students to enroll in homemaking classes in the Tonkawa school system. Homemaking is an elective for girls at all grade levels, but most ninth grade girls generally elect to take the course. In the 1971-72 school year, 30 ninth grade girls were enrolled in the two sections of Homemaking I, which met five days each week for 55-minute class periods. The classes were scheduled the last two periods of the school day. These students were 14 and 15 years of age and had a large range of abilities as indicated on the Iowa Test for Educational



Development, taken earlier in the year. Composite national percentile scores ranged from 10 to 95.

Only a few of the girls had had any previous home sewing experience, so the clothing construction unit covers the basics and culminates with the construction of a skirt and blouse.

A study of curriculum guides and textbooks was made to see what areas were covered in a beginning clothing construction unit. Concepts for the beginning clothing construction unit at Tonkawa were revised, so that upon completion of the unit the students should have developed some ability in meeting the following objectives. The student should:

1. be able to use judgment in selection, use, and care of small sewing equipment.
2. be able to identify parts of the sewing machine.
3. be able to correctly thread the machine.
4. be able to fill the bobbin, change needles, make simple adjustments, and perform regular care of the machine.
5. be able to sew with the machine smoothly and accurately.
6. be able to sew adequate seams and darts.
7. be able to hand sew fasteners neatly and securely.
8. be able to slip stitch.
9. be able to follow directions and construct a potholder, apron, or other simple project using correct sewing procedures and techniques.
10. be able to choose a commercial pattern for a simple skirt.
11. be able to construct the skirt from the pattern so it will be attractive and durable.
  - a. be able to straighten the fabric for the skirt.
  - b. be able to pin on and cut out the skirt by following the guide sheet.
  - c. be able to transfer pattern markings with the tracing wheel and washable dressmaker's carbon.
  - d. be able to staystitch curved or bias edges.
  - e. be able to sew darts and seams.
  - f. be able to insert a skirt zipper using the lapped method.
  - g. be able to apply a waistband or facing.
  - h. be able to make a neat and even hem.
12. be able to choose a harmonizing blouse pattern and fabric.
  - a. be able to follow the guide and construct the blouse with a minimum of assistance.
  - b. be able to make machine buttonholes, if needed.
  - c. be able to set in sleeves, if needed.

Objective 11, parts c (mark darts), d (staystitch), e (stitch darts), and f (insert zipper) were selected to be taught by the use of concept films. These are basic techniques which must be mastered to do almost all types of clothing construction. These techniques were often done poorly and had often required re-teaching in the writer's previous classes. They are techniques which have to be retaught for the slower student, or the student who may have missed that particular lesson. For these reasons, the writer felt it would be very helpful to develop concept films for these techniques which could be used by the whole class or by an individual.

### Staystitching Film

The following objectives for the staystitching film were developed by the writer after consulting basic textbooks and pattern guides.

After instruction with the concept film the student will be able:

1. to staystitch, after marking darts, to prevent stretching of all curved or bias edges.
2. to staystitch in the proper direction on an A-line skirt, which has a one-piece front and a two-piece back.
3. to stitch one-half inch from the raw edge using 12 stitches per inch.
4. to end stitching without backstitching or tieing.

A pretest (see Appendix A) was developed to cover the objectives. Five multiple-choice questions were developed, each with three or four possible answers. One question had two correct answers. The last two questions asked the student to select the example which had been done correctly from two sample skirt fronts and backs. These samples were passed around. One had been stitched in the proper direction and one had not. Stitching direction was indicated by penciled arrows on the fabric. Students were asked to give two reasons for their choice.

Students were directed to make an X in front of each answer which was correct on the written test. Test instructions were given orally and were also on the test paper. Students were told that they would not be graded on the test, but that it would be analyzed to see how much they learned later as a part of a research project the teacher was doing.

The films were taken in the homemaking department using a Kodak Instamatic M30 movie camera and a Sylvania Sun-Gun movie light. Super-8 cartridge Kodachrome II movie film was used. The writer's fifteen-year-old son operated the camera while the writer demonstrated the techniques. Since he was not familiar with the subject being filmed, the writer explained each step to him during the filming, just as if she were explaining the process to a student in a classroom demonstration. The films were made twice, since a malfunction of the electric eye of the camera caused the first ones to be overexposed.

The plain wood paneled walls of the classroom made a good background. A solid blue dress was worn by the demonstrator for additional emphasis to the printed fabric used for the demonstration. The writer had observed in the first films that a two-tone, three-piece ensemble was distracting. One fifty-foot cartridge of the film was used, and the viewing time for this film was four minutes.

A printed dacron cotton blended fabric was used so the wrong side would be obvious in the film, and the lighter coloring on the wrong side would permit the dressmaker's carbon markings to show easily. All of the equipment used was that available in the local homemaking classroom.

The staystitching film was taken at a table and at a sewing machine in the classroom. First the one-piece skirt front was shown

and marked with colored chalk arrows to indicate the direction in which it should be stitched. It was then stitched at the sewing machine. A close-up of a hem gauge was used to indicate the one-half inch stitching width. The camera focused on the machine as the stitching was done. One half of the skirt front was stitched from the right side of the fabric, and the other half from the wrong side. The skirt back was shown, the pattern removed, and it was marked with chalk arrows as the front had been. One piece of the skirt back was staystitched. The edge of the fabric was shown, showing that stitching is done in the direction which would rub the protruding threads downward.

The film was shown to the classes on a regular Super-8 movie projector, and later sent for cartridging for use in the Technicolor projector. After cartridging, they were available for individual use whenever desired in the classroom. The regular fifty-five-minute class period was sufficient time for viewing the film and taking the post-test.

The same written test was used for the pretest and the posttest. Each student was given two back skirt pieces of an A-line one-half scale pattern for the performance test. These pieces had previously been cut from cotton broadcloth fabric, which was available in the department. For the performance test students did the staystitching on these two pieces, and then used the same pieces later for the zipper performance test. Instructions, given orally, were to staystitch the two back skirt pieces and to mark each row of staystitching with a pencil indicating which direction it had been stitched.

### Dart Film

The film on darts was developed with the following objectives.

After instruction with the concept film the student will be able:

1. to mark a single-pointed (tapered) dart with dressmaker's carbon.
2. to pin the dart with the pins placed lengthwise and the heads downward along the stitching line.
3. to stitch the dart tapering gradually from the wide end to the point, removing pins ahead of the stitching.
4. to begin by backstitching and end by tying threads to one side.
5. to press the dart toward the center of the garment.

The written test was composed of seven multiple-choice and three selection questions (see Appendix). The multiple-choice questions had three or four possible answers. One question required more than one correct answer. For the last three questions, five darts were passed around. Two were marked with the direction in which they had been stitched, and students were asked to select the right one. Of the other three, one had been done correctly, one was too short, and one was not stitched along the line and had been backstitched at the point. Students were to select the best and poorest dart and give two reasons for their choices. The darts used for the test were made purposively by older students, but probably better examples for the test could be collected from pretest samples.

For the performance test the students were furnished with a piece of cotton broadcloth about nine inches square and a part of a skirt pattern section, which had been made by tracing a dart with pencil onto a sheet of typing paper and running it through the Thermofax machine to make a duplicating master. Copies were then duplicated for each student. Dressmaker's carbon, tracing wheels, and chalk were

available in the classroom but the students used their own basic sewing supplies. No help or instructions were given for the pretest. Students were instructed orally to make the dart as they thought it should be.

The dart film required two fifty-foot cartridges of film. The film was made in the classroom as the staystitching one had been. The film began with the title "Making Darts" made by filming black plastic pin back bulletin board letters placed against turquoise paper on the bulletin board. A package of dressmaker's carbon was shown, and the two colors of paper it contained, as well as the tracing wheel and a piece of cardboard. The pattern was pinned to the fabric and the dart was pointed out on the skirt front. The dressmaker's carbon was folded double and placed carbon sides out between the two layers of fabric, which had been cut out with the right sides out, so that markings would show on the wrong sides of both pieces. The dart was marked with the tracing wheel, and the markings shown. The dart was then folded on the center line and pinned on the stitching line with three pins, heads downward. It was next machine stitched from large to small end, with backstitching shown at large end of the dart and the knot tied at the point of the dart. The pins were removed ahead of the machine needle.

The second cartridge of film began by showing the pinning, stitching, and fastening of the second skirt dart, and the stitching across it at the seam line, so it would be turned toward the center front of the skirt. A third dart was stitched and tied, and then the four darts, including one already stitched, were pressed using a tailor's ham and a steam iron.

The film was shown in the classroom and the written and performance tests were repeated.

### Zipper Film

The zipper film was developed using the same procedures as for the previous two. The objectives for the film on putting in a lapped zipper were developed basically following the Talon zipper package. The objectives are that after instruction with the concept film the student will be able:

1. to allow 7 7/8 inch opening for a 7 inch skirt zipper.
2. to close the opening with machine basting on the 5/8 inch seam line.
3. to machine baste right side of the zipper to the right skirt back seam allowance, with the zipper face downward on the extended seam allowance. The zipper foot will be to the right of the seam line.
4. to turn the zipper face up and stitch with regular stitching from bottom to the top of the zipper with the zipper foot to the left of the needle.
5. to fasten stitching by tying threads.
6. to spread garment flat with zipper face downward on the other seam allowance and stitch across bottom, up along side of zipper, sewing through tape, seam allowance, and garment.
7. to remove machine basting, leaving an even 1/2 inch fold, which completely covers the zipper.

The written zipper test was developed to cover these objectives. It had ten multiple-choice questions, with from two to four possible answers. Students were directed to make an X in front of each answer that was correct for inserting a skirt zipper using a lapped application (see Appendix). There was only one correct answer for each question. A pre-performance test was not used.

The zipper film used two fifty-foot cartridges of film. The film begins with the title "Lapped Skirt Zipper" and continues with the demonstrator holding up a seven-inch skirt zipper package. The tape

measure is used to show that seven inches for the zipper teeth plus 5/8-inch for the seam plus 1/4-inch for ease or 7 and 7/8 inches is the length to be left for the opening. The opening is measured along the skirt back seam, and marked with chalk. The zipper is placed on the seam to show that there will be room for a seam above the zipper pull tab. The center back skirt seam is then stitched from the bottom to the place where it had been marked for the zipper to begin. A close-up of the stitch regulator shows it set at eight stitches per inch and then the placket opening is stitched closed and pressed open. The zipper is then inserted step by step. A red bobbin thread was used with white on top, so the stitchline would show up on the white zipper. The white stitching was visible from the right side of the garment. The film ends with the removal of the machine basting.

The written test was repeated after viewing of the film and for the performance test, students were given a seven-inch skirt zipper, without package directions, and used the two back skirt pieces which they had used for the staystitching test. They were instructed to insert the zipper into the center back seam using the lapped method they had just seen in the film. The only illustrative materials which were available to them after the film were one package from a Talon zipper and the skirt back with the inserted zipper, which had been used for making the film. These were posted on the bulletin board, and students could go to the board if they wished.



### Summary

These films were used during and at the end of a beginning clothing construction unit. Most of the students had never done the three procedures demonstrated, since most of them had made only a drawstring apron, elastic waist dirndl skirt, and peasant blouse. Another time the films will be used during the construction unit when A-line skirts will be constructed, and the results can then be evaluated from completed garments.

The tests were checked and evaluated to see if there was improvement in student ability and knowledge. Students were told that the results of the pretests and posttests did not influence their grades, but that they were important and were to show if they had improved any from the pretest to the post test. The students did not see the results of their tests, but the writer plans to show them and have a review of the concepts covered during their clothing construction unit during the fall of 1972, since most of them are enrolled in Homemaking II for the 1972-73 school year.

The development of these tests and films helped the writer to determine concepts and behavioral objectives which she wanted to teach and to better plan for ways to evaluate what the students had learned. This should be helpful in other units and areas of teaching, as well as the improvement of the beginning clothing construction unit.

## CHAPTER IV

### ANALYSIS OF DATA

Three concept films were developed and used. Written and performance tests were made to cover the objectives of each. Twenty-nine students completed the pretests and posttests for staystitching and zippers, and thirty completed the tests on darts.

The pretests were given before each of the three films. After the films were shown the tests were repeated as posttests. A performance test was used before and after the film on darts, and performance tests were used after the films on staystitching and putting in a zipper.

The films and posttests were used near the end of the school semester and at the completion of a beginning clothing construction unit. Only four of the thirty students had made an A-line skirt during that time. The rest of the students had selected elastic waistline dirndl skirts, which had not required staystitching, darts, or zippers. A few others had attempted these procedures on garments at home during the semester or at previous times, so some may have learned something about the three techniques from sources other than the concept films.

#### Staystitching

The staystitching test was developed with one question for each objective. (See Appendix.) It contained seven multiple-choice questions and two others which required looking at skirt pieces which had

been staystitched and marked for the direction in which they had been stitched. The correct one was to be selected. Fifty-five percent of the students scored five or above on the ten point pretest, compared to 83 percent who scored five or above on the posttest. See Table I.

TABLE I  
PERCENT OF STUDENTS ANSWERING STAYSTITCHING  
TEST QUESTIONS CORRECTLY

Question Number*	Scores		Difference
	Pretest N = 29	Posttest N = 29	
1	86	86	0
2	14	59	45
3	55	41	-14
4	89	93	4
5	44	55	11
	31	31	0
6	51	66	15
7	69	83	14

\*See Appendix A, page 51, for questions.

The first question, "Staystitching is done by: setting the stitch length at 12 stitches per inch," was answered correctly by 86 percent of the students on both pretest and posttest. Question 5 had two correct answers. Most students who missed part of the question had checked only one answer. Only 13 percent of the students failed to get at least one part of it correct.

On questions six and seven, 66 percent of the students selected the skirt front which had been stitched correctly, and 83 percent

selected the skirt back which was stitched correctly. Eighty-three percent did it correctly on the performance test.

Twenty-nine students took the test on staystitching. The pretest was given March 13, 1972, and the posttest on May 15, 1972.

### Darts

The pretest on darts was given on March 9, 1972, during a regular class period. Students answered the ten questions by selecting the correct answers for seven multiple-choice questions, selecting the dart which was stitched in the proper direction, and selecting the best and poorest dart from samples which were passed. For the performance test each student made a dart. The two tests were repeated after the viewing of the film on March 13, 1972.

Thirty students took the dart tests, and the results of the written posttest indicate ninety percent or more of them answered questions 3, 4, 5, 7, and 9 correctly. All of the students did better on the posttest than on the pretest. See Table II.

On the posttest 83 percent of the students got question one correct, though those who missed it did select ways that darts could be marked, but the question asked for the best way to mark darts. Fifty-seven percent of the students missed question two, but most of them had it one-half right since there were two correct answers and they had marked only one of them. Only 6.66 percent of the students missed both parts of the answer. Seventy-three percent got question six correct. Fourteen percent of them indicated that darts should be pressed upward, ten percent that they could be pressed in any direction, and three percent did not answer the question. Pressing the darts

toward the center was shown in the film, but according to the results of the test greater emphasis of this point is needed.

TABLE II  
PERCENT OF STUDENTS ANSWERING DART TEST  
QUESTIONS CORRECTLY

Question Number*	Scores		Difference
	Pretest N = 30	Posttest N = 30	
1	40	83	43
2	7	57	50
3	73	97	24
4	67	97	30
5	67	93	26
6	60	73	13
7	63	97	33
8	83	97	14
9	83	90	7
10	73	77	4

\*See Appendix B, page 53, for questions.

A performance test was given before and after viewing the dart film. The performance test was rated by use of a six point scorecard. One point was given for each of the following six factors, if they had been done properly. Six points would be a perfect score. The six points were:

1. The dart is the length indicated on the pattern.
2. The dart is the width indicated on the pattern.
3. The stitching is tapered well.
4. The stitching is fastened by backstitching on the wide end.
5. The stitching is tied to one side at the point and threads clipped to 1/8 inch.

6. The machine stitch is adjusted for 12 stitches per inch and the tension is balanced.

No one scored six on the performance pretest, 6.66 percent scored five, and 93.33 percent scored three or below. (See Table III.) After viewing the film, the performance test was repeated and the darts showed improvement. Thirty-three and one-third percent of the students scored six, and 60 percent scored five. Only 6.66 percent were not satisfactory, scoring a two and a three.

TABLE III  
SCORES ON PERFORMANCE TEST ON DARTS AND PERCENT OF  
STUDENTS RECEIVING EACH SCORE

Scores	Pretest	Posttest
6	0	33.33
5	6.66	60
4	16.66	0
3	30	3.33
2	30	3.33
1	3.33	0
0	13.33	0

### Zipper

The ten question zipper test (see Appendix) was developed in the same way as the ones on darts and staystitching, only none of the questions had more than one correct answer.

The written pretest was given on May 16, 1972, and the posttest on May 17, 1972. Twenty-nine students took both tests. The average score

on the written pretest was 4.7 and the average on the posttest was 7, out of a possible ten points.

On the written posttest 89 percent got the first question, about the length of the placket opening, and 97 percent were correct on the second question about how to prepare the placket opening. (See Table IV.) Seventy-six percent of the students got question four correct on the pretest and 72 percent on the posttest. Some zipper package directions state this step differently from the way it was demonstrated in the film. Eighty-three percent answered question five correctly on the posttest.

TABLE IV  
PERCENT OF STUDENTS ANSWERING ZIPPER  
TEST QUESTIONS CORRECTLY

Question Number*	Scores		Difference
	Pretest N = 29	Posttest N = 29	
1	10	89	79
2	48	97	49
3	55	41	-14
4	76	72	- 4
5	21	83	62
6	62	48	-14
7	21	21	0
8	55	62	7
9	38	83	45
10	48	86	38

\*See Appendix C, page 56, for questions.

The main steps in actually putting in the zipper seem to be the hardest for students to understand and to remember as indicated by the low percentage getting questions 3, 4, 6, 7, and 8 correct. Most students remembered the preparation steps and the last steps, as the questions 1, 2, 9, and 10 were answered correctly by over 80 percent of those taking the posttest.

On the performance test, 51 percent put in a satisfactory zipper according to standards set by the writer, based upon experience in teaching this level student. Twenty-four percent had the steps basically correct, but had one or more mistakes which would necessitate doing part of it over again before it would be satisfactory for use in a garment. Twenty-four percent of the others did not get past the preliminary preparation steps, since they worked slower and there was no other class period available for them to finish later, because semester tests were being given during the same time period.

Only four of the students (14 percent) had previously inserted a lapped zipper, and they had all required much individual help to do it. After viewing the film, the students appeared to the writer to have a better understanding of what they were to do.

#### Evaluation of Student Interest

After the first film was shown, students were asked the question, "Would you have preferred to learn about darts some other way?" This question was written on the board and students responded in writing on the back side of their posttest. Some comments were: "This was an easy way to learn." "It wasn't hard this way." "I can be sure I learned the right way." "I learned a lot from the film." "The film



helped a lot and also discussing them." "This way seems easier." One student did not answer the question, one would have preferred having her mother show her how, one would have preferred another method of marking the dart, and one would have preferred having someone show her while she was at the sewing machine.

The students were not asked to comment in writing on the other two films, but the student interest observed by the writer remained at a high level. Students said that they liked to see the films, and seemed especially interested in the fact that it was the writer showing them in the film, instead of someone else.

### Summary

There was a gain in student knowledge and ability as shown by a comparison of pretest and posttest scores of the 29 or 30 students completing the tests. This was true for 23 of the 28 questions on the three written tests, while there was no gain on only two of the questions, and no difference on three questions.

Of the 29 students who took the written staystitching pretests and posttests, 19 or 65.5 percent showed a gain in their scores, five stayed the same, and four made a lower score by one. Those showing a gain ranged from 12.5 percent to 37.5 percent of gain. All thirty students gained in scores from the dart pretest to posttest. Gains ranged from three to eight answers or 30 percent to 80 percent. Of the 29 students who took the written zipper pretests and posttests 22 or 76 percent showed a gain while 7 or 24 percent showed no change. Gains ranged from 1 to 7 questions or 10 percent to 70 percent.

The dart performance test showed 6.66 percent scoring 5 or 6 out of a possible 6 points on the pretest and 93.5 percent scoring 5 or 6 on the posttest. The writer was pleased with the student ability on the dart performance tests after viewing of the film. The improvement shown was apparent and of real inspiration to the writer.

Since pre-performance tests were not used for staystitching and zippers, no comparisons were made, but 83 percent did staystitching correctly, and 51 percent put in a satisfactory zipper on the first try after having viewed the films.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The main emphasis of this study was to develop and evaluate three concept films which could be used for individualized instruction to enrich a beginning clothing construction unit. Concepts covered by the films were tapered darts, staystitching, and inserting a lapped skirt zipper as used on an A-line skirt.

The writer reviewed current literature on characteristics of learners, individualized instruction, 8mm single concept films, and evaluation of home economics. The writer checked source directories for film loops available in the clothing construction area and wrote to the companies which had clothing construction films listed to get their catalogs and information on clothing films. Films were ordered on approval from three companies and previewed to determine their usefulness to the objectives of the writer's beginning classes. Some of them would be helpful, but the cost was prohibitive to the local home-making budget. Others were not suitable.

The writer planned and made three concept films in the spring of 1972. These films were used with 29 or 30 ninth grade students in the spring of 1972. A written and performance test was developed for each film. The written test was used as a pretest and posttest for all films. A performance test was used before and after the dart film and after the staystitching and zipper ones. Results were evaluated.

### Conclusions

The students appeared to the writer to have a high degree of interest in the films, and most said it was an easy way to learn something new and one that they liked.

The writer plans to use the films in future classes with the entire class and also to have them available for individual use in a section of the classroom she plans to set up for individual study. The writer plans to develop more films to add to these first ones, and to replace them as the need arises.

If beginning students are required to make an A-line skirt, the three concept films will be most useful. The prevailing skirt styles of the future and patterns which are available will influence this decision.

The writer feels that the development and use of concept films is practical for the classroom teacher and offers possibilities for use in many areas of homemaking. The cost, time, and skills needed to do them are reasonable and learning is facilitated.

### Recommendations

The written tests need some revision. The writer feels that if all questions required only one correct answer the results could be more easily evaluated. If two answers are used, the questions which require more than one answer should be especially designated. Questions three and four of the zipper test need further clarification.

In future classes, use of the staystitching film before the dart film should help to clarify the order in which these two procedures are to be done.

When the zipper film is remade, perhaps one step should be changed to make the film follow current Talon package directions--to have the zipper open rather than closed when it is stitched to the seam allowance.

A step-by-step visual should be available for reference after the viewing of the zipper film. This could help to clarify some procedures for putting in the zipper, since this technique is complex and difficult for beginning students. Having the film available for re-viewing should also be helpful.

If the study is repeated, the films should be ready at least a semester ahead of the time they are needed, so that they would be used with students before the beginning of their first clothing construction unit, and not at the end of a school semester as was done this time. The performance test should be used before and after all of the films, in order to secure more evidence of student learning from viewing the film.

Cassette tape recordings and written material could be made to go with each film. This would permit students to use them individually.

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## APPENDIX A

### STAYSTITCHING PRETEST AND POSTTEST

Name \_\_\_\_\_

## Staystitching

Make an X in front of each answer that is correct for an A-line skirt.

More than one answer may be correct.

1. Staystitching is done by setting the stitch length at:  
☐ a. 12 stitches per inch.  
☐ b. 8 stitches per inch.  
☐ c. 20 stitches per inch.
2. Staystitching on an A-line skirt is done:  
☐ a. on all edges which are curved.  
☐ b. on all edges which are straight.  
☐ c. on all edges.
3. Staystitching should be done:  
☐ a. before marking.  
☐ b. before stitching darts.  
☐ c. after stitching darts.
4. Staystitching is to:  
☐ a. gather the edge.  
☐ b. stretch the fabric.  
☐ c. prevent the fabric from becoming stretched.
5. Staystitching is done:  
☐ a. in the direction which will push down the ends of protruding threads.  
☐ b. in the direction which will push up the protruding threads.  
☐ c. from outside toward centers.  
☐ d. from centers outward.
6. I will pass two skirt fronts. Arrows on the fabric show which direction they have been stitched. They are labeled A and B.  
☐ is done correctly. Give two reasons why you chose this one.
7. I will pass two skirt backs with staystitching, also labeled by the direction in which they were stitched. They are labeled C and D.  
☐ is done correctly. Give two reasons why you chose this one.

## APPENDIX B

### DART PRETEST AND POSTTEST

Name \_\_\_\_\_

## Darts

Make an X in front of each answer that is correct for the type of fabric chosen for class projects. More than one answer may be correct.

1. The best way to mark darts is with:  
☐ a. a ballpoint pen.  
☐ b. pins through all lines.  
☐ c. chalk at the dots.  
☐ d. tracing paper and tracing wheel.
2. Before darts can be stitched, they are prepared for sewing by:  
☐ a. pinning along solid line.  
☐ b. pinning along dotted line.  
☐ c. folding on solid line.  
☐ d. pinning between the lines.
3. The direction in which tapered darts should be stitched is:  
☐ a. from the wide end toward the point.  
☐ b. from the point toward the wide end.  
☐ c. from either direction.
4. Backstitching should be used to secure the row of stitching at:  
☐ a. both ends of the dart.  
☐ b. at the pointed end only.  
☐ c. at the wide end only.
5. After completing stitching of the dart, threads at the end of the row of machine stitching should be:  
☐ a. clipped to 1/4 inch where backstitching has been used.  
☐ b. tied twice at the point of the dart, then clipped to 1/4 inch.  
☐ c. clipped to 1/8 inch or less without tying.
6. When pressing the horizontal bust darts, darts should be pressed:  
☐ a. upward.  
☐ b. downward.  
☐ c. any direction.
7. When pressing vertical darts should be pressed:  
☐ a. toward the outside edge of the garment.  
☐ b. toward the center of the garment.  
☐ c. doesn't make any difference.

8. I will pass around two completed darts with arrows showing which way they were stitched. They are labeled A and B.  
\_\_\_\_\_ is stitched in the proper direction.
9. Three other darts are labeled C, D, and E. Examine them carefully to see how well they are done.  
\_\_\_\_\_ is the best dart. List two reasons why you chose this one.
10. \_\_\_\_\_ is the poorest dart. List two reasons why you chose this one.

## APPENDIX C

### LAPPED SKIRT ZIPPER PRETEST AND POSTTEST

Name \_\_\_\_\_

## Lapped Skirt Zipper

Make an X in front of each answer that is correct for inserting a skirt zipper using the lapped application. There is only one correct answer.

1. The length of the placket opening for a 7 inch skirt zipper should be:  
☐ a. 7 inches.  
☐ b. 7 1/2 inch.  
☐ c. 7 5/8 inch.  
☐ d. 7 7/8 inch.
2. To prepare the placket opening you should:  
☐ a. machine baste the opening closed.  
☐ b. pin the zipper to the seam allowance.  
☐ c. pin the opening closed.  
☐ d. stitch the opening closed like the seam.
3. The first step is to place the open zipper:  
☐ a. face side down on the back seam allowance (left).  
☐ b. face side down on the front seam allowance (right).  
☐ c. face side up on the back seam allowance (left).  
☐ d. face side up on the front seam allowance (right).
4. The teeth should be place to the:  
☐ a. right of the seam line.  
☐ b. left of the seam line.
5. The zipper is held to the extended seam allowance:  
☐ a. with hand basting.  
☐ b. with pins.  
☐ c. with machine basting.
6. For the second step the zipper foot is:  
☐ a. shifted to the left of the needle.  
☐ b. shifted to the right of the needle.
7. The zipper should now be:  
☐ a. closed and turned face up.  
☐ b. opened and turned face up.  
☐ c. closed and turned face down.  
☐ d. opened and turned face down.
8. The zipper is then ready to be machine stitched:  
☐ a. along the fold in the back seam allowance (left).  
☐ b. from the right side of the skirt.  
☐ c. from the back side of the zipper.

9. In the final step, the garment is spread flat with the zipper face down on the seam allowance. You then stitch:

- ☐ a. through the zipper and the seam allowance.
- ☐ b. through the seam allowance and the garment.
- ☐ c. through zipper tape, seam allowance, and front of garment.

10. The machine stitching should be ended by:

- ☐ a. backstitching.
- ☐ b. tying both threads on the wrong side.
- ☐ c. tying both threads on the right side.



APPENDIX D

LIST OF FILMS PREVIEWED

## SEWING SKILLS

1. THREADING THE UPPER PART OF THE MACHINE
2. REMOVING UNWANTED STITCHES
3. BLIND HEMMING
4. HOW TO MAKE GATHERS
5. USING DRESSMAKER CARBONS
6. DIRECTIONAL STAY-STITCHING
7. HOW TO MAKE A DART
8. SETTING THE STITCH REGULATOR
9. INSERTING THE FILLED BOBBIN
10. FILLING THE BOBBIN
11. MAKING A PLAIN SEAM
12. UNDER-STITCHING

Available from: BFA Educational Media  
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 Santa Monica, California  
 90404

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PATTERN MEASURING  
 SEWING AND PRESSING  
 INSERTING A ZIPPER  
 TURNING UP A HEM

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DETERMINING FIGURE TYPES  
 PREPARING THE FABRIC  
 LAYING THE PATTERN  
 CUTTING AND MARKING  
 DIRECTIONAL STAYSTITCHING  
 MAKING PLAIN SEAMS  
 MAKING DARTS  
 APPLYING A NECK FACING  
 MAKING A TAILORED COLLAR  
 LINING A TAILORED GARMENT  
 MAKING A WELT POCKET  
 HEMMING A COAT

INSERTING AN OVERLAP ZIPPER  
 APPLYING A SKIRT BAND  
 MAKING A HEM  
 JOINING BODICE AND SKIRT  
 APPLYING A FITTED FACING  
 INTERFACING A BODICE  
 INTERFACING AND ATTACHING A COLLAR  
 SETTING IN A SLEEVE  
 LINING A SKIRT  
 UNDERLINING A GARMENT  
 INTERFACING FOR TAILORED GARMENTS  
 MAKING A BOUND BUTTONHOLE

Available from: McGraw-Hill Book Company  
 Manchester Road  
 Manchester, Missouri 63011

## VITA

Elouise Frudy Scheirman

Candidate for the Degree of

Master of Science

Thesis: THE DEVELOPMENT OF CONCEPT FILMS FOR A CLOTHING CONSTRUCTION UNIT IN NINTH GRADE HOME ECONOMICS

Major Field: Home Economics Education

### Biographical:

Personal Data: Born at Tonkawa, Oklahoma, November 4, 1932, the daughter of Mr. and Mrs. Schley Frudy. Married James R. Scheirman, July 17, 1955.

Education: Graduated from Tonkawa High School in May 1950; received an Associate degree from Northern Oklahoma College in May 1952, received Bachelor of Science degree from Oklahoma State University in May 1954, with a major in Home Economics Education. Received credits from Oklahoma State University in fall of 1959 and from the University of Oklahoma in the summers of 1960 and 1961. Completed the requirements for the Master of Science degree at Oklahoma State University May 12, 1973.

Professional Experience: Home Economics teacher at Lamont, Oklahoma 1954-55; Home Economics teacher for the Bureau of Indian Affairs, Cheyenne Agency, South Dakota, 1955-56; and Vocational Homemaking Teacher at Tonkawa, Oklahoma, from January 1960 until the present.

Professional Organizations: Omicron Nu, Phi Kappa Phi, American Home Economics Association, American Vocational Association, National Education Association, and Oklahoma Education Association.