THE DEVELOPMENT OF A SLIDE PRESENTATION ON THE PATTERN DEVELOPMENT THEORY FOR FLARED SLEEVES ADAPTED FOR USE ON COMMERCIAL PATTERNS

by 4589

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A MASTER'S REPORT

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INTRODUCTION AND JUSTIFICATION

Problems in teaching are numerous, while satisfactory and workable solutions are few. Today students as well as instructors are concerned about the quality of teaching. With the increasing mobility, large numbers, range of abilities and varied backgrounds of students, it becomes more and more difficult to give individual instruction. Teachers have special needs for instructional materials and techniques that will be interesting, communicative, and effective with all individuals. Visual aids at every level of teaching are needed. When visual aids are integrated into classroom learning situations, behavioral objectives can more readily be achieved.

Pattern Development Theory, as taught at Kansas State University, is a laboratory learning experience. New information is presented daily to students by means of lectures and demonstrations in which precise methods of drafting are used. The student is expected to comprehend the new material presented, and then perform the task assigned. The problems inherent in these lecture-demonstration situations are caused by a variety of factors:

a. Advanced skills in alteration, draping, and construction are required.

b. Accurate drafting skills as well as some basic knowledge of mathematics and geometry are required.

c. Viewing is often difficult because of the large size.

d. The demonstration is usually presented once only.

This type of demonstration, if properly captured on film and available for student use, could increase understanding of the topic through repetition, review, and close observation. It would also relieve the instructor of having to repeat work so that she may use that time to accomplish other goals.

High school teachers could encourage creativity by trying to introduce students to aspects usually not taught, such as pattern development. Students who want to develop new styles by drafting with commercial patterns could be stimulated by visual aids, but the student as well as the teacher is limited by the lack of instructional material in the area of pattern development.

The purpose for developing a slide presentation using the Brockman drafting method with commercial patterns is to enable teachers to use visual aids in their classrooms. The simplicity of drafting procedures for the development of certain pattern designs makes them especially adaptable for use on basic commercial patterns. The same step-by-step instruction for the development of flared sleeves on both the sleeve pattern developed by the Brockman method and the basic commercial sleeve pattern lends itself to visual-aid production. The wide range of flared styling that is possible makes this sleeve type very popular and suitable for use with students, and for these reasons the flared sleeve is used as the example in this report.

LITERATURE RELATED TO PREPARATION AND USE OF CLASSROOM SLIDES

As increasing recognition is given to the audio-visual media and as more suitable facilities are provided for their use, Kemp said that "we will see increased dependence on various media to serve many instruction purposes--and not as enrichment devices to be used if time permits, but rather as carefully planned and integrated parts of the teaching-learning environment" (5:3). Extensive changes in our society, and the educational system as a whole, and in educational media in particular, have effected major changes in the roles of teachers. Brown stated that "media, carefully evaluated and used in optimum fashion, are the tools of a truly professional teacher" (1:22).

Ever since the development of the 35 millimeter camera and color film, photography has become a national pastime, and the 2×2-inch slide has become a valuable and popular teaching tool (6). From the standpoint of their teaching value, availability, simplicity, and flexibility of projection, slides are one of the most versatile types of all projected materials.

Slides, pictures which are photographed, drawn, or otherwise reproduced on a transparent material and mounted for use in a slide projector, bring pictorial material into the classroom (3). Realistic reproduction of an original subject is a characteristic noted by Kemp (5). The projection on a screen enlarges the picture so that it may be examined and studied. The projected picture remains still and steady so that detail may be noted and commented upon (2). Kemp (5)

and the Division of Extension, University of Texas (4) pointed out similar advantages and concluded that slides can be used by an individual or group.

The flexibility of 2×2-inch slides is the principal advantage for teaching (1). Slide sets can be tailored to fit individual school situations. They may be projected in sequence, one or more may be selected for projection, or they may be used in a combination of slides with other sets. Slides are versatile in that they can be used in a regular projector and also used in a 3M Daylite projector, with the aid of adaptors. This projector allows the slides to be projected in a classroom without altering the lighting. The 2×2-inch slide is one of the more economical teaching materials. The 35 millimeter slides are inexpensive to prepare and to reproduce.

Brown stated "'miniature' 2×2-inch slides are somewhat difficult to handle because individual slides are easily disarranged" (1:469). Although Kemp (5) noted that the ease of handling and usefulness of magazine storage seems to outweigh the disadvantage of possible sequence mix-up. Several ways have been found to keep slides in proper order. The most economical arrangement seems to be boxing them in small sets, or units of ten to forty slides. Each slide is numbered and identified with a short title written on the edge of the mount. Slide units are most easily handled when they are placed in boxes of uniform size, with unit title and number of slides plainly marked on the outside (6).

"Planning, shooting, and presenting 2×2-inch slide stories represents unusual opportunities for developing functional and interesting

learning experiences" (1:468). Both Kemp (5) and Brown (1) have similar methods for preparing a slide story. The steps involved are briefly:

1. Determine the main and subsidiary purposes of the slide story and list objectives.

2. Prepare a rough story outline including descriptions of pictures in outline form.

3. Expand the story outline into a shooting script. Describe the type of camera shot and content and arrangement of pictures.

4. Shoot the pictures and arrange the finished slides in the best sequence to tell the story.

5. Try out the finished slide series.

PROCEDURE

Careful preparation is necessary for the successful production of slides. Mastery of the subject to be filmed is required to be able to communicate a specific idea with a limited but sufficient number of pictures. Organization is another essential element a producer should consider. A simple and concise method should be followed allowing the producer as well as the audience to harvest as many benefits as possible. A procedure, adapted from a method proposed by Kemp (5), has been used:

1. Concept

   Preparation of visual materials (possibly slides) aid student comprehension of the Brockman drafting method for flared sleeves.

2. Purposes

   a. To offer opportunities for close observation by students at any time and as often as needed.

   b. To allow review without the presence of instructor.

   c. To increase understanding of the topic through repetition.

   d. To relieve the instructor of repeating work so that she may use that time to accomplish other goals.

   e. To stimulate creative pattern styling by students who use commercial patterns.

   f. To provide visual aids for teachers.

3. Behavior Objective

The student, after viewing the visual materials, will be able to draft a flared sleeve from either a commercial pattern or a Brockman sleeveboard sloper. When the pattern is proved in fabric the sleeve will have the desired amount of flare and an adequate amount of ease for a proper fit.

4. Potential Users

The student audience (in regard to age, educational level, and present knowledge of subject) is taken into consideration in order to insure success. A list of equipment and detailed instruction accompany the visual material to make it easy to use.

5. Visual Material Selection

Proper selection of the media to be used to best communicate the subject resulted in the use of slides. Quality, low cost, and convenience of use are among the principle reasons for this decision.

6. Specifications

a. Special Pattern Drafting Equipment:

Tracing paper
French curve
Protractor
18-inch ruler
Underpaper (24"×24")

b. Special Assistant:

Cameraman

c. Filming Equipment:

35-millimeter camera
35-millimeter color film
Tripod
Exposure meter
Light source (flood lamps)
Background drop (burlap)
Stand to hold pictures
Two dress forms
Control room

d. Costs, Spring 1970:

Film (Kodak Ektachrome-X color) ...	$ 1.85
Prepaid mailer (Kodak)	2.31
Muslin for sleeves	.59
Tracing vellum paper	.80
Felt tip pen	.46
Total	$ 6.01

Note: Facilities and other equipment were available at no cost. It was possible to shoot a duplicate set of slides because of the 20 exposure film.

7. Story Outline

A picture sequence was developed to divide the drafting steps into single concepts. The shape of the entire pattern was changed by the drafting so each picture was taken at the same angle and the same distance from the camera.

8. Script

The script was developed as a complement to the slides in order to clearly and concisely describe the visual drafting concepts.

9. Preparation of Graphic Material

a. An actual sleeve pattern was used in both the practice

and final copy in order to utilize the proper drafting equipment. True proportions are lost when this equipment is not used. (The camera accurately reduces the picture.)

b. An added benefit resulted by using an actual pattern in the preliminary steps. A reliable measurement for the undersheet could be established and be prepared in advance. Rearrangement, elimination, and changes could be made without too much difficulty. The preparation allowed Mrs. Brockman, developer of the drafting method, to offer her suggestions at a time when changes could be easily made.

c. Large undersheets of paper which were necessary to accommodate the expansion of the flared sleeve were furnished by the Clothing, Textiles, and Interior Design Department.

d. Tracing vellum was used for the pattern in order to show changes in the pattern position.

e. The lettering on the pictures was done with a Rapidograph Lettering Set furnished by the Educational Media Center.

f. The different varieties of flared sleeves were constructed in unbleached muslin to show similarities, differences, and variations in styling.

10. Taking the Pictures

The necessary technical skills in photography required

the producer to ask the assistance of a cameraman who took care of proper lighting, camera angle, and other necessary arrangements, as well as shooting. The film was then sent in a prepaid mailer to Chicago, Illinois, for developing.

11. Evaluation of Slides for Clarity

Picture clarity was evaluated by the producer, the cameraman, and the author of the drafting method.

SCRIPT

The wide range of flared styling that is possible makes this sleeve type very popular and suitable for use with students. Variations in sleeve length that can be used and variations in the amount of flare that can be added combine to produce several distinct sleeve types which use the same drafting methodology:

a. A short sleeve with a minimum flare in which the underarm seam line is on straight grain is the standard short sleeve. Its lowered cap has less ease and is therefore easier to set in and also more comfortable to wear than the basic sloper sleeve.

b. The long sleeve with maximum flare and open at the wrist is the bell sleeve. When the flare is gathered into a cuff it is the bishop sleeve.

c. Between these two extremes a wide variety of flare and length combinations offer great freedom in choice.

The slides used in this project are labeled and numbered:

1. Photograph-Short Bell Sleeve, Maximum Flare, and Short Blouse Sleeve, Minimum Flare.

2. Photograph-Long Bell Sleeve, Maximum Flare, and Long Bishop Sleeve, Maximum Flare; Styling Variation.

3. Photograph-Short Bell Sleeve, Maximum Flare, and Short Bishop Sleeve, Maximum Flare; Styling Variation.

4. Diagram-Preparation of Sleeveboard Sloper for Use in Drafting the Long Sleeve with Maximum Flare.

5. Diagram-Preparation of Commercial Pattern for Use in Drafting the Long Sleeve with Maximum Flare.

6. Diagram-Preliminary Development of Maximum Flare.

7. Diagram-Planning the Cuff Line Curve.

8. Diagram-Framework for the Cuff Line Curve.

9. Diagram-Completion of the Long Sleeve with Maximum Flare.

10. Diagram-Preparation of Sleeve Pattern for Use in Drafting the Short Sleeve with Minimum Flare.

11. Diagram-Preliminary Development of Minimum Flare.

12. Diagram-Completion of Short Sleeve with Minimum Flare.

Equipment necessary for drafting patterns:

Ruler, 18-inch
French curve
Marking pen or pencil
Protractor
Tracing paper
Sleeve pattern
Scissors
Tape

Preparation of a Sleeve Pattern for Use in Drafting the Long Sleeve with Maximum Flare

Step One

A straight sleeve without elbow darts acts as the basic pattern on which drafting changes can most easily be made to develop flared sleeves. Either a commercial sleeve pattern that fits the individual or a sleeveboard sloper, drafted from individual measurements by the Brockman method, may be used as a basis for drafting these sleeves.

In commercial patterns, one pattern is often used for both short sleeves and long sleeves fitted with elbow darts. Recommendations for making a short sleeve pattern may suggest cutting off the long sleeve pattern on a line shown. For the development of all versions of the flared sleeve, it is necessary to use a straight sleeve body (without darts). This requirement can be met by folding the commercial pattern on the center grain line and tracing the front seam line through to the back. The Brockman sleeveboard sloper, which is shown on Slide 4, contains the pattern markings that are needed. When the markings are added and the seam allowances cut away a commercial pattern becomes adaptable, as shown on Slide 5.

The same methodology can be used for the sleeveboard sloper (Slide 4) and the commercial pattern (Slide 5). The markings that are needed for this drafting procedure are explained as follows:

Bicep Line. The bicep line which connects the two underarm points furnishes the crosswise grain line of the sleeve.

Center Grain Line. The center grain line which runs the length

of the sleeve from the top of the cap to the wrist is at right angles to the bicep line.

Break Line. The break line which is parallel to the bicep line and is midway between it and the top of the cap, furnishes pivoting points (break points) at the level where the sleeve seam line turns from overarm to underarm.

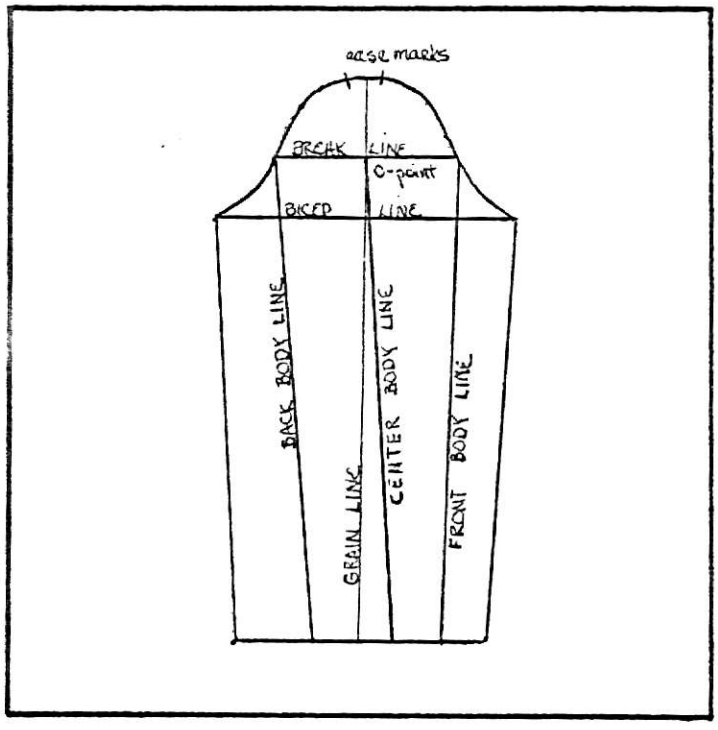
Ease Marks. Ease marks which identify the amount of ease that exists in the seam line of the sleeve cap are found by measuring the sleeve seam line against the armhole seam line it will join. All of the ease cannot be taken out of the sleeve cap. As a rule, between 1/4 to 3/4 inch must remain or the sleeve will appear to be smaller than its armhole. To establish the amount of expendable ease measure the linear length of the back sleeve cap (from the underarm point to top of cap). Measure the linear length of the back bodice armhole. The difference between these two measurements is the expendable ease for the back. Mark this amount on the top of the back sleeve cap, and mark an equal amount on the front sleeve cap.

O-point. The O-point which is the intersection of the grain line and the break line, furnishes the center pivot point.

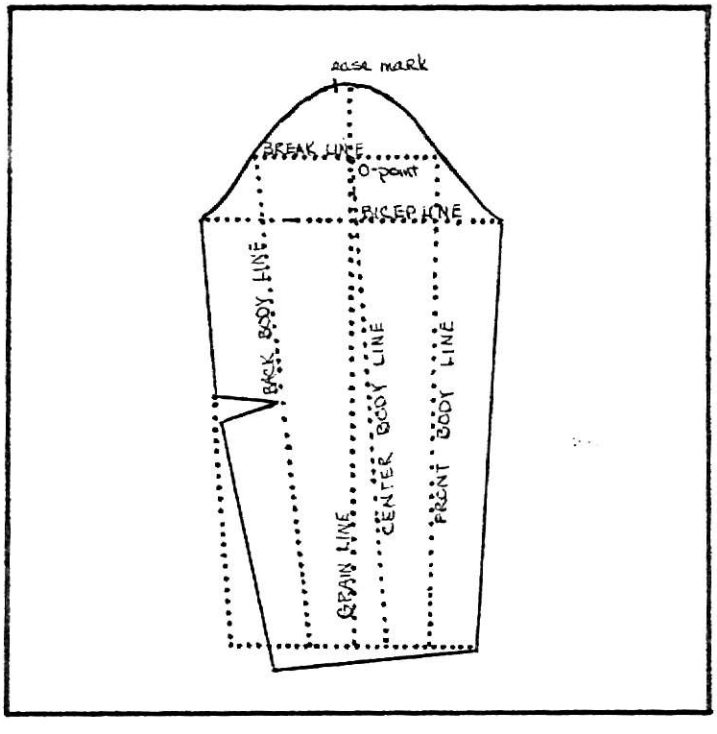
Center Body Line. The center body line is used as the center of the sleeve body. It is drawn from the O-point to a mark 1 1/8 inches from the grain line on the front wrist. This makes the front half of the sleeve smaller than the back half, thus the back of the sleeve is fuller than the front when developed in fabric.

Front Body Line. The front body line which divides the front sleeve in half at the wrist, is drawn to the front break point.

Back Body Line. The back body line which divides the back sleeve in half at the wrist, is drawn to the back break point.



Sleeveboard Sloper



Adapted Commercial Pattern

Preliminary Development of Maximum Flare

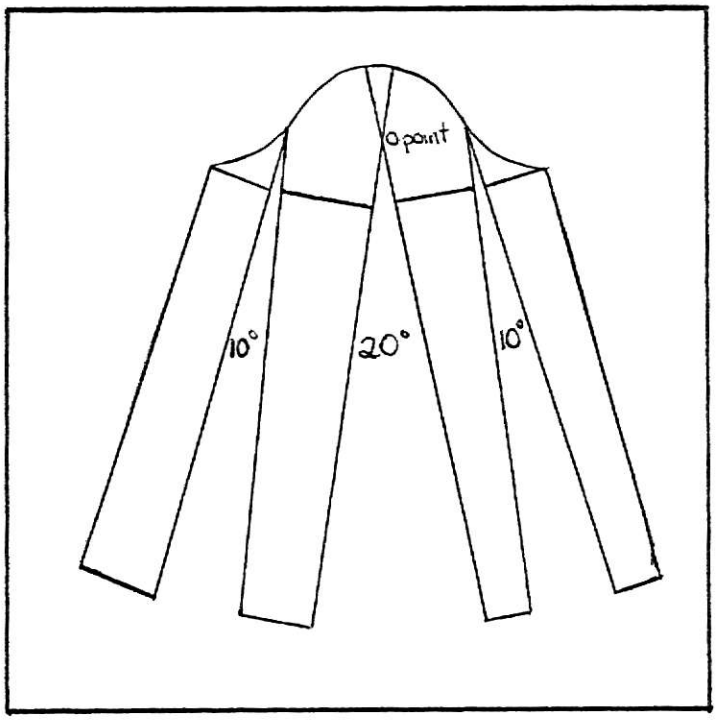
Step Two

Maximum flare is the amount of flare in which all of the expendable ease is taken out of the cap line, so that the sleeve seems to be the same size as its armhole. To pivot the flare in the sleeve:

Slash the pattern from the cuff line on the center body line up to the O-point, and down from the top of the cap on the grain line to the O-point (which now becomes a pivot point and allows the cap line to be reduced and the sleeve body to be increased).

Slash both back and front body lines to the cap line.

Pivot to open the slashes (as shown). A maximum total of 40 degrees, with a 20 degree angle at center and 10 degree angles on each side, is possible. The ease marks at the top of the cap may meet but must not overlap. When the ease marks meet but less than 20 degrees is pivoted for the center angle, pivot each side angle one half the amount of the center angle.



Planning the Cuff Line Curve

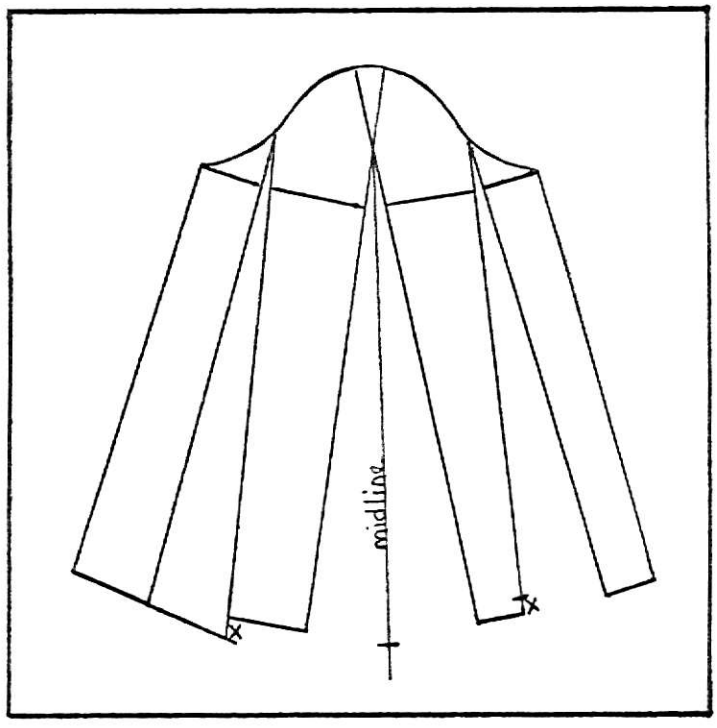
Step Three

The long flared sleeve has considerably more fullness or flare in the back half than in the front half. The cuff line, therefore, must be lengthened at the back and shortened at the front to give the proper styling.

Establish a midline between the back and front sleeve sections by dividing the center angle in half by the use of a protractor or a ruler measurement.

On the midline mark the length of the center body line from the O-point to the wrist.

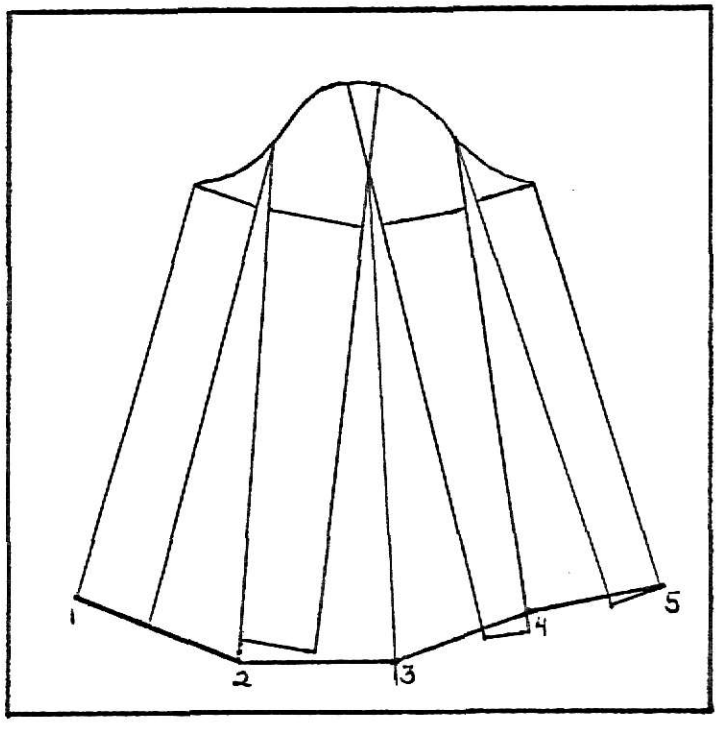
Extend the wrist line of the back underarm section over to the back overarm section as shown. Measure X, and mark the same distance up from the wrist line on the corresponding front overarm section.



The Framework for the Cuff Line Curve

Step Four

Connect the five marked points on the cuff line with straight lines as shown.



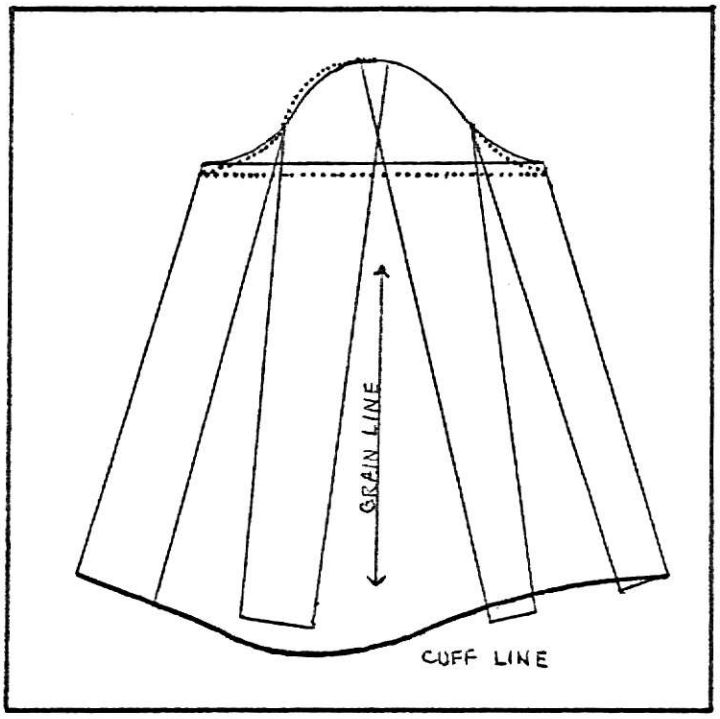
Completion of the Long Flared Sleeve

Step Five

The Cuff Line. Use the French curve between the back overarm point and the midpoint and make a smooth curve.

The Sleeve Cap Curve. Use the French curve to smooth the line of the cap. When the overlapping causes the back and front to mismatch increase the shorter side.

The Grain Lines. To establish the crosswise grain line, (the bicep line), connect the underarm points with a straight line. Lower this line by 1/4 inch and use the French curve to bring the sides of the sleeve cap to the new underarm points. To establish the lengthwise grain, (the vertical center grain line), fold the new bicep line back on itself, with the fold on the center of the cap (midway between the two ease marks). Draw the grain line from the top of cap to the cuff line. (The point at the top of cap joins the shoulder point of bodice when the sleeve is set in.) Note: It is necessary for any sleeve to be positioned accurately on the two grain lines if it is to hang well and fit properly.

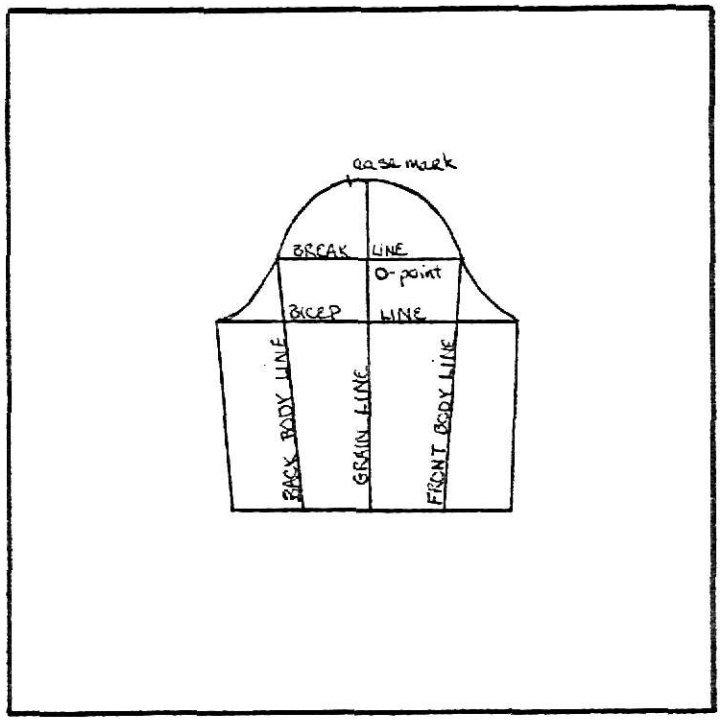


Preparation of Sleeve Pattern for Use in Drafting the Short Sleeve with Minimum Flare

Step One

A flared sleeve which ends above the elbow uses the same pattern markings shown in Slides 4 and 5 with this exception:

Grain Line. The grain line is now the center body line. This divides the sleeve evenly and puts equal fullness in the front and back when developed in fabric.

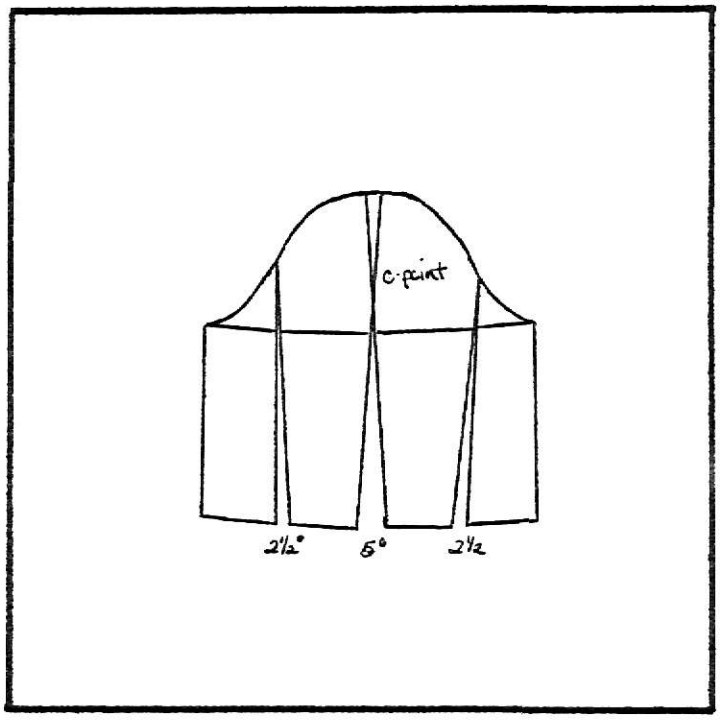


Preliminary Development of Minimum Flare

Step Two

A minimum flare is an amount which brings the underarm seam line perpendicular to the bicep line. This amount of ease reduction makes the sleeve easy to set in and very comfortable to wear. It is customarily used with short sleeves.

> Slash the pattern from the cuff line on the grain line, (center of sleeve), up to the O-point, and down from the top of the cap to the O-point (which now becomes a pivot point and allows the cap line to be reduced and the sleeve body to be increased).
>
> Slash both back and front body lines to the cap line.
>
> Pivot open to make the sideseams parallel to each other, and so that the angle in the center is twice as big as each side angle.



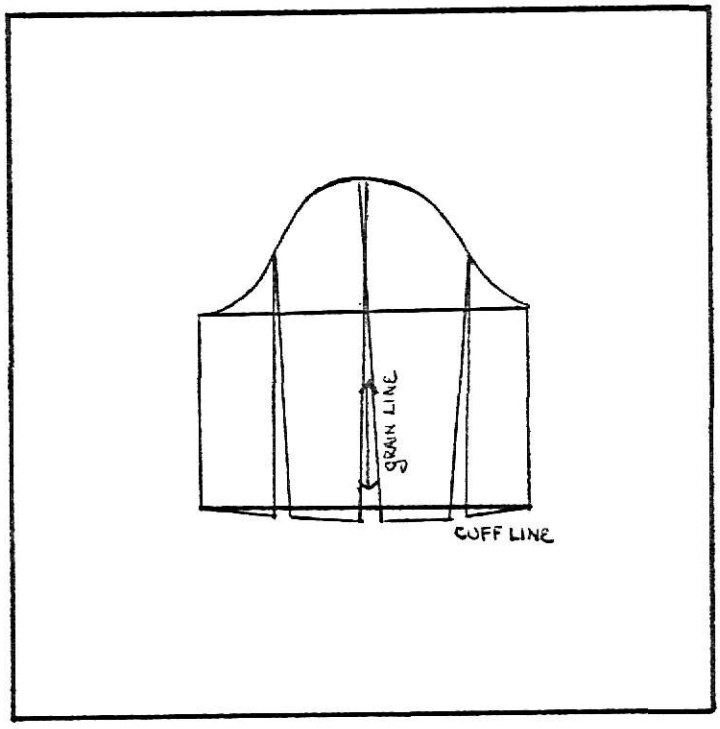
Completion of Short Sleeve with Minimum Flare

Step Three

The Sleeve Cap Curve. Use the French curve to smooth the line of the cap. When the overlapping causes the back and front to mismatch increase the shorter side.

The Grain Line. To establish the crosswise grain, (the bicep line), connect the underarm points with a straight line. To establish the lengthwise grain, (the vertical center grain line), fold the bicep line back on itself, with the fold on the center of the cap (on or midway between the two ease marks). Draw the grain line from the top of cap to the cuff line. (The point at the top of cap joins the shoulder point of bodice when the sleeve is set in.) Note: It is necessary for any sleeve to be positioned accurately on the two grain lines if it is to hang well and fit properly.

The Cuff Line. The end of the sleeve should be parallel with the bicep line. Draw a line connecting the end of sleeve points. This produces a crosswise straight grain line that can easily be finished.



CONCLUSIONS AND RECOMMENDATIONS

Instructional materials and visual-aids need to be available for teachers to use with groups composed of individuals of widely varying abilities. These types of media may be viewed repeatedly by one individual or more in a laboratory situation and will not disturb other students.

Teachers also need materials which can provide individual instruction with only a minimum of teacher participation or assistance. The presence of a teacher is not necessary for the operation of a slide projector. The script which accompanies the slide presentation is adequate so that the student will not need the teacher. When the teacher is the only source of information, a slide presentation makes a lesson available to students who have been absent or to students who would like extra help.

The successful adaptation of the Brockman drafting method to commercial patterns can open new doors of creativity for students as well as for teachers. Projects in this area can be offered to students, at or beyond the high school level, who utilize commercial patterns or the Brockman theory of pattern development.

It seems possible to the writer that other pattern development projects, for the bodice and the skirt, as well as for other sleeve styles, could be undertaken as long as each slide did not cover more than one concept or step in the total development of a pattern. Both slides and a written script are essential for comprehension. The slides

show the development while the script explains the procedure and theory of the physical change.

Any project developed with a step-by-step procedure could be undertaken by students for class projects since the cost is nominal. One way of handling such projects might be to obtain funds from the department to be paid back through the purchase of duplications by teachers in high school, junior college, or university, or students who might someday teach.

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THE DEVELOPMENT OF A SLIDE PRESENTATION ON THE PATTERN DEVELOPMENT THEORY FOR FLARED SLEEVES ADAPTED FOR USE ON COMMERCIAL PATTERNS

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Visual-aid materials are not available in the area of pattern development theory, therefore a slide presentation and accompanying script of pattern development for flared sleeves adapted for use with commercial patterns was produced. The planning and shooting of a slide series gave an opportunity to develop a teaching aid that is both interesting and useful. The production of the slide series involved planning and preparing the slide story, writing the shooting script, shooting the pictures, arranging the finished slide series, and preparing the instruction script.

The slide series and its step-by-step instruction script for drafting flared sleeves from a basic sleeve pattern were designed for use at levels of education ranging from high school through college, where either commercial patterns are utilized or the Brockman pattern development theory is taught.