Experimental Procedure
III EXPERIMENTAL PROCEDURE

The experimental procedure consisted of the following steps:

A. Study of the consumer preferences and problems in clothing selection

B. Standardising body measurements for selected women's wear and for preschoolers

C. Organising a garment unit for rural young women and training them in the production of clothing items, and

D. Evaluating the garment unit with reference to the training and production aspects

A. Study of Consumer Preferences and Problems in Clothing Selection

The consumer preferences and problems were studied under three categories through,

1. A survey on consumers regarding selected women's garments

2. A survey on consumers regarding their selection of preschoolers' clothing, and

3. Surveys on educated mothers regarding
   a) their choice of clothing for preschool boys and girls, and
   b) their problems in selecting readymade garments
regarding petticoats and cholias. The questionnaire consisted of details on tailor made garments such as:

i. purchasing habits
ii. problems faced
iii. materials selected and
iv. suggestions for improvements

On readymade garments, the questionnaire considered

i. Sizes
ii. Type of materials preferred
iii. Type of petticoat and blouse designs preferred
iv. Texture and material and
v. Problems in ready to wear

The questionnaire was pretested on 25 candidates and modified as presented in Appendix III.

c. Conducting the survey

The survey was conducted within four weeks on young women who extended utmost cooperation, willingness and interest in filling up the questionnaire.

d. Analysis and interpretation of findings

The answers in the questionnaires were consolidated and analysed. The results are presented in detail in 'Results and Discussion'. The major findings are outlined in this chapter, since they formed the criteria for the procedures of research work.
2. Survey of consumers regarding preschoolers' clothing

A survey was conducted on consumers to study their preferences and problems on preschoolers' clothing. It included the following steps:

a. Selection of the area and sample
b. Selection of the method
c. Conducting the survey and
d. Analysis and interpretation of findings

e. Selection of the area and sample

Areas such as Velandipalayam, Kovilmedu, Jawaharpuram, Bathnapur, Gandhipuram, R.S.Puram, Ramanathapuram and Coimbatore city were selected in view of the proximity of these places to the college campus. Three hundred consumers formed the sample, and they were selected at random from different income levels, on the basis, that they could have one or two preschool children and their family must be a nuclear one.

b. Selection of the method

Direct interview method was selected for collection of the data, considering the fact the response is greater add more accurate than any other method and all doubts could be clarified on the spot. Accordingly, an interview schedule was framed, which included the following aspects.
i. Family background

ii. Expenditure on family clothing and on preschoolers' clothing

iii. Types of material, colour, texture, colour, combinations, and designs preferred for preschool children's dresses

iv. Preference for readymade, tailormade and homemade garments, reasons for selection and problems faced in the selection

v. Types of trimmings, decorations, fasteners and plackets preferred for different garments and

vi. Child's influence on parents in clothing selection

Pilot studies were conducted with the schedules prepared. The consumers doubts in the schedule were rectified. The modified schedule is given in Appendix IV.

c. Conducting the survey

Home visits were conducted and the consumers interviewed at their leisure time. To give a clear picture to the respondents regarding textile varieties available, aids were prepared and these included samples on fabrics, colours, designs and textures.

d. Analysis and interpretation of data

The collected data were consolidated, tabulated and analysed and presented under Results and Discussions, Chapter IV.
3. Conducting surveys on educated mothers on preschoolers' clothing

Surveys were conducted on 200 educated mothers, in regard to their preferences and problems in the selection of preschoolers' clothing.

The surveys included the following steps:

a. Selection of the area and sample
b. Selection of the method
c. Conducting the survey and
d. Analysis and interpretation of the data

a. Selection of the area and sample

The surveys were conducted in Coimbatore city. One hundred educated mothers who had one or two preschool boys and another hundred who had one or two preschool girls were selected as the sample for the study. The mothers were selected from the different nursery schools such as Sri Avinashilingam Nursery School, Christy Nursery School and Shanthi garden. They belonged to the middle and high income groups.

b. Selection of the method

The questionnaire method was adopted for conducting the surveys on educated mothers. A questionnaire was formulated to obtain the following details:
i. Background information

ii. Money spent on family and preschoolers’ clothing

iii. Sources of information for clothing selection

iv. Fabrics, designs, colours, textures and garments preferred in preschoolers’ wear

v. Plackets, fasteners, trimmings and decorations preferred

vi. Problems faced in clothing selection for preschoolers and

vii. Child’s influences in clothing selection

The feasibility of the questionnaires was tested by conducting pilot studies based on the light thrown by pre-testing, certain modifications were done and the finalised questionnaire is given in Appendix V.

c. Conducting the survey

The questionnaires were distributed through the help of the authorities of the selected nursery schools to the educated mothers and they were checked and collected by the investigator.

d. Analysis and interpretation of the data

The data were consolidated, tabulated and analysed and the major findings are presented in the Chapter Results and Discussions. The findings of the study formed the basis for further research work.
3. Standardising body measurements for selected women's wear and for preschoolers

This included two aspects:

1. Standardising body measurements for selected women's wear and for preschoolers

2. Developing patterns and evaluation of the standardised measurements.

1. Standardising body measurements for selected women's wear and for preschoolers

The experimental procedure for this aspect included the following steps:

Standardising body measurements for:

a. Gholi
b. Petticoat
c. Preschoolers

Standardising body measurements

a. Gholi

This included the following steps:

i. Selection of the sample

ii. Grouping

iii. Taking body measurements

iv. Standardising body measurements

i. **Selection of the sample**

The samples for standardising body measurements were the young women students of Sri Avinashilingam Home Science College, Coimbatore. Size being the main consideration, age level was given secondary importance.

ii. **Grouping**

The samples were selected on the basis of bust measurement ranging from 67.5 to 92.5 cm (27" to 37"). Since most of the samples wore this garment, only in this bust range, these measurements were grouped into five classes. They were the following:

<table>
<thead>
<tr>
<th>cm</th>
<th>Inch</th>
<th>Bust size</th>
<th>cm</th>
<th>Inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>67.5-72.5</td>
<td>(27-29)</td>
<td>Bust size</td>
<td>70</td>
<td>28</td>
</tr>
<tr>
<td>72.5-77.5</td>
<td>(29-31)</td>
<td>Bust size</td>
<td>75</td>
<td>30</td>
</tr>
<tr>
<td>77.5-82.5</td>
<td>(31-33)</td>
<td>Bust size</td>
<td>80</td>
<td>32</td>
</tr>
<tr>
<td>82.5-87.5</td>
<td>(33-35)</td>
<td>Bust size</td>
<td>85</td>
<td>34</td>
</tr>
<tr>
<td>87.5-92.5</td>
<td>(35-37)</td>
<td>Bust size</td>
<td>90</td>
<td>36</td>
</tr>
</tbody>
</table>

Each class included 80 samples thus making a total of 250 samples. Even though the metric system is adopted in India for different purposes so far as garments are concerned the British system also is still in practice.
iii. **Taking body measurements**

After reviewing the works of Bakshi (1959), Kumar (1962), Juvekar and Juvekar (1956) and Doongaji and Dash-pande (---) the essential body measurements taken into consideration for choli were:

1. Center back length
2. Center front length
3. Shoulder to bust point
4. Waist length
5. Sleeve length
6. Back shoulder width (Plate I)
7. Bust circumference
8. Waist circumference
9. Armhole circumference
10. Lower sleeve circumference
11. In between bust points
12. Weight
13. Height

iv. **Standardizing body measurements**

Body measurements for choli were standardized based on bust measurements as commercial patterns are available on the basis of the above only.
BACK SHOULDER WIDTH - A MEASUREMENT REQUIRED FOR CHOLI

PLATE I
Five bust sizes had been selected as stated earlier. Mode was the statistical tool used for standardisation.

As stated by Gupta (1981) lower limits were considered while standardising body measurements. Since commercial patterns and ready-made dresses are sold in even numbers the size was taken in even numbers for all the five classes. For example, for the bust size 27" - 29" the size was taken as 28" (70cms). Depending on the average bust measurement for each class other measurements like chest, waist, sleeve length, shoulder width, were standardised using mode.

The investigator classified the bust measurement as discrete series. In discrete series quite often mode is determined just by inspection by looking to that value of the variable around which the items are most heavily concentrated. (Gupta, 1981). Hence the investigator adopted the inspection method and standardised the body measurements for the different bust sizes.

**Standardisation of Measurements**

b. Petticoats

This included the following steps:

i. Selection of the sample

ii. Taking measurements

iii. Grouping

iv. Standardising body measurements
i. Selection of the sample

The investigator selected 600 college girls between the age group of 18-25 years for standardising the measurements for petticoats.

ii. Taking measurements

The measurements taken were the waist, hip, length, from waist to ankle and waist to hip.

iii. Grouping

Commercially readymade petticoats are available in the market, based on length, for 90 cm (36"), 95 cm (38"), 100 cm (40"), 105 cm (42") and 110 cm (44") respectively. Hence length was taken as the standard for classifying the other three measurements, the hip, waist and waist to hip.

iv. Standardising body measurements

The length measurements of the selected samples ranged from 87.5 cm (35") to 107.5 cm (43"). The samples were classified based on length measurement following the discrete system. The modal value for the hip, waist and waist to hip for the particular length measure was determined and where this was ambiguous the median was taken into account. In certain cases the median was considered to be the lower limit to which one or two cm were added. With the above procedure, the hip, waist and waist to hip based on length measurements were tabulated and analysed. The grouping of length measure-
ments revealed that six groups could be tabulated with more than 30 samples in each length category. After tabulating the above the modal or median values were clubbed to form standard sizes described below:

<table>
<thead>
<tr>
<th>CM</th>
<th>Inch</th>
<th>CM</th>
<th>Inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>87.5-92.5</td>
<td>(35-37)</td>
<td>Size 90</td>
<td>(36)</td>
</tr>
<tr>
<td>92.5-97.5</td>
<td>(37-39)</td>
<td>Size 95</td>
<td>(38)</td>
</tr>
<tr>
<td>97.5-102.5</td>
<td>(39-41)</td>
<td>Size 100</td>
<td>(40)</td>
</tr>
<tr>
<td>102.5-107.5</td>
<td>(41-43)</td>
<td>Size 105</td>
<td>(42)</td>
</tr>
</tbody>
</table>

**Standardising body measurements**

c. *Preschoolers*

This included the following steps:

i. Selection of the subjects

ii. Taking body measurements

iii. Grouping and

iv. Standardising body measurements

1. Selection of the subjects

A total of 850 children, 430 boys and 420 girls all preschoolers belonging to the age group of 3-5 years were selected as the sample for the study.

The subjects were healthy and had a good nutritional status. This age group was selected, because it was an approachable group through the nursery schools. Furthermore in children's apparel there is a vast scope for designing different styles of garments in this age group. The following nursery schools in Coimbatore City were selected
i. Sri Avinashilingam Nursery school

ii. Chinmayananda school

iii. Royal Preparatory school

iv. Bharati preparatory school

v. Sri Ram Nursery school

vi. Sasibalika Vidya Mandir

vii. Shanthi nursery school

viii. Vivekananda Nursery school

ix. Shanthi gardens

x. Avika Nursery school

xi. Christy Nursery school and

xii. Prerna Garden school

11. **Taking body measurements**

The following equipment were used for taking body measurements accurately. A Detecto weighing machine made in the USA with adjustable device for accuracy was utilised for taking weights in kilograms. A meter scale was used to measure the height. A standard tape measure guaranteed as durable and non-stretchable, marked in centimeters and having metal tips on both ends was used. In addition, scale, cord and tailors' chalk were used. Since it was not possible to obtain foundation garments, the measurements were taken over smooth fitting undergarments as the banians and panties (Plate II).
BUST MEASUREMENT OF THE PRESCHOOL CHILD - TAKEN OVER
SMOOTH FITTING UNDERGARMENTS

PLATE II
CORD TIED AROUND WAIST LINE ACTS AS GUIDE FOR TAKING FRONT WAIST LENGTH MEASUREMENT
1. Neck to shoulder
2. Center back length
3. Back waist length
4. Centre front length
5. Front waist length
6. Sleeve length (outer)
7. Shoulder to elbow
8. Sleeve length (inner)
9. Waist to heel
10. Waist to knee
11. Waist to ankle
12. Waist to thigh
13. Thigh girth (straight)
14. Thigh girth (slant)
15. Crotch depth (total)
16. Chest width back
17. Back shoulder width
18. Chest width front
19. Armpit round
20. Upper arm round
21. Elbow round
22. Wrist round
23. Armpit depth
24. Neck round
25. Chest round
26. Waist round
xxvii. Hip round
xxviii. Crotch depth (seat)
xxix. Height
xxx. Weight

The above measurements were listed out in the guide sheet in the order in which it would be easy to take, involving minimum movement and causing least irritation to the preschooler. At the outset rapport was established with the child. The child was engaged in conversation and the purpose of taking the measurements was explained to him while getting acquainted with him. The children generally had immense comprehension and extended in most cases, maximum cooperation. The measurements were taken and recorded in the metric system. Besides the body measurements the age and sex of the child were also recorded. The age verified from the records maintained by the school authorities.

iii. Grouping

Children's paper patterns are graded by chest measurements. (Picken, 1949; Bane, 1973; Fisher, 1973; McCall, 1972; Family Circle, 1979). Hence in selecting patterns for children the chest measurement was decided to be the standard since children of the same age range vary differently in height, weight and body build.
From the measurement charts, the body measurements were transferred to cards which had been specially printed for the purpose. (Appendix VI). As chest measurement forms the basis for sizes it was taken as the main measurement, for grouping the other measurements.

iv. Standardising body measurements

Bust groups consisting of 20 and more children were taken up for further tabulation. Under each bust measurement, the rest of the body measurements were grouped and the modal value for each body measurement belonging to that particular bust size was determined, following the discrete series system. The mode or modal value is that value in a series of observations, which occurs with the greatest frequency (Gupta, 1981). According to Saxena, (1970), mode shows the commonest result, that is most often obtained and is of very general application. The mode rather than the average in chest measurements is the number most suitable in readymade clothes. Wherever the modal value gave an ambiguous picture, the median was determined. The median was considered as the lower limit to which one or two more were added and this was decided to be the actual value for the particular measurement. Using the above procedure, the central tendencies of the 27 body measurements were tabulated and analysed. The grouping of bust size revealed that eight bust sizes could be tabulated for boys (50-57 cm) and nine for girls (48-56 cm). Height and weight measurements
in relation to bust size were tabulated separately. The standardised body measurements for selected women's wear and for preschoolers are presented in Chapter IV.

2. Developing patterns for sizes formulated and evaluation of the standardised measurements

The procedure for the above included the following steps:

a. Developing patterns for choli and evaluation of the same

b. Designing patterns for petticoats and evaluation of the same

c. Developing dress designs for preschoolers and evaluation of the standard body measurements

d. Adaptation of standard body measurements to different types of dresses for preschoolers

a. Developing patterns for choli and evaluation of the same

The measurements taken under the different bust groups were standardised and sizes were formulated in the following steps:

i. Developing a sample pattern

ii. Developing patterns for sizes formulated from standardised body measurements

iii. Constructing a muslin pattern for each size and

iv. Evaluation of the developed patterns under each size for fitting, comfort and general appearance
1. Developing a sample pattern

Individual figures differ much and no two figures are alike for the same size. Since drafting is the only method suitable even for figures with some of regularities, the investigator adopted this method to frame the patterns. For drafting the choli design, Juvekar and Juvekar's (1956) method was followed as the instructions were simple, the drafting procedure clear, and alterations were easy to make.

A sample pattern was developed for one bust size using the above method and the pattern was altered to meet the choli requirements. This sample pattern was cut out and using this, a muslin pattern was constructed and tested for fitness. Based on the responses of the wearer, the investigator made alterations in the sleeve cap line. The wearer was satisfied in all other aspects of fitting such as position of the darts, side seams, shoulder width, full length and comfort.

ii. Developing patterns for the sizes formulated from standardised body measurements

Patterns were developed for different bust sizes from standardised body measurements. For drafting the choli design, Juvekar's (1956) method was adopted, as this method gave satisfactory results on the test pattern. The pattern was further altered to meet the choli requirements and also to obtain a good fit for the figure.
iii. Constructing a muslin pattern for each size

Muslin was chosen for constructing the basic garment slopers because Strickland (1956) states that it will eliminate any mistakes in the constructing the process. Five muslin choli patterns were constructed for the five different bust sizes. Since plain seam is the best seam for making the blouse these were used, while making the muslin cholias. The sample draft of choli is given in Appendix VII.

iv. Evaluation of the developed patterns

For evaluation 10 students, coming under each bust size, were selected. They were made to wear the constructed choli for evaluating such aspects as, ease, fitting, and comfort as per rating scale given in Appendix VIII. The investigator noted the alterations as suggested by the candidates.

b. Designing patterns for petticoats using standardized measurements

Since the majority of the young women came under the category of 95 cm (38") and 100 cm (40") the above two sizes were taken as the standard for developing paper patterns for petticoats. Before designing the paper patterns, consumer preferences and the preferences of girls of sewing class regarding four gore and six gore petticoats were ascertained and this showed that only six gore petticoat was preferred
by consumers. Hence the pattern for this type of skirt was
developed after reviewing the works of Kumar (1962) and
Boongaji and Deshpande (- - ). These were modified and a
suitable pattern was evolved by the investigator. The draft
thus prepared is given in Appendix IX.

- Construction of petticoats and evaluation of the same

The material selected for constructing the petticoat
was poplin since the results of the survey regarding consumer
preferences revealed that all preferred and used poplin
petticoats. The petticoats were constructed and given for
evaluation to ten candidates. Various aspects such as fit,
comfort, drape and construction aspects were evaluated by
means of a rating scale which is presented in Appendix X.

c. Developing dress designs for pre-schoolers and evaluation
of the standard body measurements

Apart from the studies already conducted on consumers
of different income levels and educated mothers in regard
to preschoolers' clothing, this step included the conduct
of surveys on selected tailors and shopkeepers and also the
observation of children in the nursery for the costumes
worn by them. The findings of these studies enabled the
investigator to select the most popular garments for deve-
loping dress designs with a view to evaluate the measure-
ments standardised by her for preschoolers of 3-5 years.
Ten professional tailors who were in the process of making children's dresses from different areas of Coimbatore city were selected to collect information on certain aspects of preschoolers' garments. An interview schedule with ten essential questions was used. Such details as types of garments mostly stitched for preschoolers, sources of obtaining design ideas, methods adopted for stitching, self help features introduced by them in dresses constructed by them were collected. The schedule is presented in Appendix XI.

Tailors made full shirts, bush shirts, half pants and baba suits and bell bottoms for boys. All of them constructed frocks and pantees, and the majority stated they made maxis, skirts and blouses for girls. The tailors mostly obtained design ideas from customers; they also imitated readymade garments, pattern books, magazines, movies and their own originality were the other sources for ideas for designs.

The tailors stated they either took the measurements of children for the required garments or used model garments given by customers. Specially for baba suits and frocks patterns books also were referred to. This shows commercial patterns were not adopted by any of the tailors and this can be attributed to the non-availability of such patterns in India. Different types of self help features were introduced by tailors in preschoolers' garments such as buttons, front openings and pockets.
11. Results of the shopping survey

Ten shops which made sales on readymade garments were selected in different areas of Coimbatore, so as to collect information regarding the available readymade garments and the mostly sold garments for preschool boys and girls. A proforma was formulated to elicit this data from shopkeepers and this is presented in Appendix XII.

In all the ten shops, frocks, bush shirts, half pants and baba suits were available. Maxis were available in nine shops. Banians, full shirts, bell bottom and tops were available in 6-7 shops and few shops had skirts and blouses. The mostly sold garments happened to be frocks, followed by maxis, bush shirts, half pants and baba suits.

The garments were of different price ranges depending on the quality of fabrics, sizes, trimmings and decorations present. Prints, floral designs, dots and stripes, birds and human figures were common in frocks. Decorative fasteners, embroidery as smocking, applique work, pockets, designs created by laces, gathers, pleats, and tucks were common in frocks and baba suits. Pockets and fasteners formed the decorative features in bush shirts and half pants. In some cases embroidered bush shirts were also available. The fabric varieties available in the shops for the garments are shown in Appendix XIII.
Poplin seemed to be the most common fabric for most of the garments except half pant. Next ranked terycot and polyester fabrics, followed by two by two and cambric. Shirts were available in poplin, terycot and polyester fabrics. Drill, terycot and stretchlan were the common fabrics for half pant. Frocks were available in all types of smooth textured fabrics, such as poplin, two by two, cambric, terycot and polyester.

iii. Observation of children in the nursery school

A group of 50 preschool boys and girls from the nursery school in Sri Avinashilingam Home Science College campus was selected for the purpose of observation of costumes. The observation was done for seven days with a schedule outlined for children's costume. The schedule for collection of data is presented in Appendix XIV. The results were recorded and they are depicted in Appendices XV-A and XV-B respectively.

More than 70 per cent of the girls were frocks and very few wore other garments such as maxis, different types of skirts or blouses. The majority of the boys wear full or half shirts with half pant and few, full pants. From the findings of the homemakers' survey it was evident that all mothers preferred frocks for their preschool girls and around 45 per cent, the other garments. More than 90 per cent preferred bush shirts and half pants for their preschool boys.
From the shopping survey it was clear that frocks for girls and bush shirts and half pants for boys were available in all shops and these were the garments mostly preferred and purchased by consumers.

From the interview conducted on tailors, it was evident that the most common items stitched by them as per the orders of customers happened to be frocks for girls, bush shirts, half pants and full shirts for boys.

The results of the observation of the 50 preschool girls for a week revealed that almost all the girls wore frocks as the most common costume, and the boys, bush shirts and half pants.

Hence frocks, shirts and half pants proved to be the main items of garments that have a great potential to be produced as readymade items for marketing purposes and consumers purchased these items mostly as readymade for this age group. The standardised body measurements for preschoolers can be utilised not only for the above items most commonly used but also for creating and developing a variety of designs in dresses and styles.

iv. Selection of costume

The most suitable garments for the preschool girls being the frock, and for the preschool boys, the bush shirt and half pant, these garments were selected for further research work.
v. Designing the basic slope

For designing the basic slope the method selected was drafting, since any garment can be made by the drafting method. Moreover drafting is the best method of studying patterns as it gives the knowledge of the shape of patterns, the changes in shape that are needed to produce different effects. It is an economical and less tedious method. Since the basic requirements for drafting happen to be accurate measurements, the formulated standard body measurements of preschoolers were utilised. The investigator also felt it was a means of checking the accuracy and adaptability of the standard measurements. Hence these were used for preparing the patterns using the drafting method and then to construct the garments.

A literature review was done, for designing the basic slope for the selected dresses of little girls and boys and these were available from the works of Juvekar (1958), Kumar (1962), Bakshi (1958), Pandit (1967) and Dongaji and Deshpande (—). The drafts for bodice and sleeve blocks for frocks and also for shirt and shorts are provided in Appendices XVI, XVII and XVIII respectively.

To achieve good fitting the selected garments (frock, bush shirt and half pant) were made on muslin cloth. Ten preschool girls and ten preschool boys with average body measurements were selected from the college nursery school
to conduct fitting trials and the children were made to wear the muslin garments.

For correct size, becomingness and proper fitting it was very essential to conduct these trials. The instructions for drafting patterns were then modified suitably, and utilised.

vi. Developing dress designs for preschoolers

Designs were outlined keeping in view the findings of the surveys conducted on mothers of preschoolers, opinions of shop keepers and tailors and observations made in the nursery school. The investigator added her own ideas and thoughts to the above. From the basic slopers made, the designs were developed for the selected garments.

Dresses for girls

Two designs for frocks were formulated keeping in view consumer preferences and problems.

In the selection of colours and fabric designs the views of consumers were taken into consideration and accordingly deep colours as red and green, floral designs with plain, gingham with plain fabrics were selected.

In regard to readymade dresses many problems were faced by mothers particularly in trimmings and decorations. The main problems were due to laces (50%), embroidery and painting (40%), smocking (35%), beads (40%) and hence it
was decided not to have the above for the selected frock designs. Since the front opening enables the child to wear and remove the garment herself this self help feature was introduced in the garment and buttons and loops formed the fasteners.

The first frock was of the A line type with plain and check combination. It had shawl collar and plain sleeves and front opening which formed the self help feature. Fabric loops and fancy buttons formed the fasteners.

The design selected for second frock had plain and printed combination with turtle neck collar, raglan sleeves and plain cuffs. The skirt was circular, with ten panels, five in front and five in back, with a centre big panel and one plain and one printed panel on either side. Since back opening was preferred by more than 85 per cent of the mothers this was incorporated in this frock. Press buttons were used as fasteners since they preferred the same. (Plate IV).

Selection of fabrics

The fabrics selected for making the frock were cotton as from the survey results it was clear that cotton materials were preferred. The homemakers preferred two by two, poplin and cambric for frocks. According to salesmen of ready made garment shops the mostly sold frocks were in the above types
TWO FROCK DESIGNS SELECTED FOR PRESCHOOL GIRLS
of fabrics only, and most of the orders as received by tailors from customers to make frocks were also in two by two, poplin and cambric materials. As more than 60 per cent of the homemakers preferred fine and medium textured materials these were selected for stitching the frocks, since two by two, poplin and cambric varieties satisfied all these requirements these were selected for making the dresses.

**Dresses for boys**

Two sets of garments were made and for these two different designs were selected. For the first set, in the bust shirt yoke was incorporated in front with plain material. For half pants the plain material was used for sides, bottom and for band. For the second set of garments, the bush shirt had shawl collar, and the half pant had patch pockets, the combination was white with printed material (Plate V).

**Selection of fabrics**

In readymade stores bush shirts and half pants were available in different types of fabrics, colours, textures and design combinations. The information given by consumers, and salesmen revealed that poplin and terycot were preferred mostly for bush shirt and drill and terycot for half pants. Mothers revealed their choice towards fine and medium textures and hence the above fabrics were selected for the boys' garments. Surveys on consumers and educated mothers
TWO SETS OF BUSH SHIRTS AND HALF PANTS SELECTED FOR PRESCHOOL BOYS

PLATE V
revealed that the majority of them preferred pockets and
decorative fasteners for both the garments and few preferred
tucks, embroidery, including applique work for bush shirts.

The shopping survey revealed that most of the trimmings
and decorations used for bush shirts were pockets. Tucks
embroidery including applique and decorative fasteners were
used for both the garments. According to tailors pockets
and decorative fasteners were incorporated as self help
features in childrens' garments. Based on the above findings
pockets and decorative fasteners were incorporated by the
investigator in the selected garments.

vii. Evaluation of garments

For evaluating the constructed garments rating scales
were framed and these are given in Appendix XIX. These
consisted of such details as general appearance, construction,
comfort and fitting aspects, trimmings and decorations,
designs and self help features. The rating scales were
distributed to 20 teachers and mothers and 30 post graduate
students for evaluating the constructed garments.

The garments were put on the children and the selected samples were requested to come to the nursery to do the
evaluation. The data obtained were collected, analysed and
interpreted.
d. Adaptation of standard body measurements to different types of dresses for preschoolers

The feasibility of the adaptation of the standard body measurements for different types of dresses for preschoolers was also attempted.

Patterns for the following items of apparel were formulated and dresses for boys and girls were constructed (Plate VI).

1. Girls' A line dress and panties
2. Girls' maxi wear
3. Girls' traditional skirt and blouse
4. Boys' slack and knickers
5. Boy's full shirt and half pant
6. Boys' pyjamas and kurta

The constructed dresses were put on selected children and they were evaluated mainly for size and fit apart from dress design and attractiveness (Plate VII).
A lay out of dresses for preschoolers designed and made out of standard body measurements
C. Organising a garment unit for rural young women

The following aspects were covered in organising a garment unit for rural young women.

1. Selection of the place
2. Selection of the sample
3. Setting up the garment unit
4. Planning the educational programme and
5. Conducting the training programme

1. Selection of the place

The place selected for organising the tailoring unit was the village of Kooranur in Seeliyur Panchayat of Kamadamai Block, Coimbatore District. The site was at the Krishi Vigyan Kendra of Vivekanandapuram at a distance of 44 kilometres from Coimbatore city. Kooranur is one of the 18 villages selected for the IRD Programme. Since one of the major objectives of the research was to train rural young women in the vocation of dress making, and provide employment opportunities to them this interior area was selected where the women could be motivated for maximum cooperation in rural development programmes. As a preliminary step, the investigator made an effort to study rural characteristics by the conduct of a survey among the rural households to learn their family background, clothing practices, problems and requirements.
a. Study of rural characteristics

A survey was conducted at Karasadai Block at Coimbatore district in selected villages which included Vivekanandapuram, Devanapuram, Thakampatti, Vijayanagaram, Sallayur, Buigancoor, Dhayanoor, Seeliyur, Tholampalayam, Veilangadu, Pudur, Medur, Kendayapalayam. The above villages had already been selected for IRD Programme. Easy accessibility to the investigator and cooperation extended by the villagers were the main reasons for the selection of the above mentioned villages.

Selection of the sample

Two hundred and fifty rural families were selected as samples for the study from the above villages with the representation of 20 per cent of the population at random from each village.

Selection of the method

The interview method was selected by the investigator as it helps to clarify all doubts and elicit accurate information. A detailed interview schedule was formulated which included such aspects as family background, the expenditure pattern of rural families, clothing selection and purchasing habits and their problems. The schedule after pretesting on 50 families for reliability was modified and it is presented in Appendix XX.
Conduct of the field investigation

Using the schedule, personal interviews were conducted in the homes after establishing rapport with the informants. The families were categorised as low, middle and high income on monthly per capita income basis (Government of India, 1981). Such classification showed that 74 per cent were in the low, 16 per cent in middle and 8 per cent in high income groups respectively. The collected data were consolidated and analysed. The major findings are presented in Appendix XXI.

To sum up, the rural families are characterised with a very low income with agriculture as the main occupation. The basic necessities of life forced them to spend a large amount on food, and a meagre sum on clothing. A large family size, traditional habits and customs, a low literacy level, lack of interest in clothing, lack of facilities, interest and time to participate in educational programmes proved to be the real handicap.

Rural families are more concerned about price and quality in fabrics along with serviceability. Hence for clothing the masses of India, attractive serviceable low priced textile goods including readymades should be made available. There is a dire need for increasing the family income and educational status. If economic benefits could be achieved by income earning occupations their standard of living can be raised and there would be a change in their mental
outlook also as nothing can make them happier than the eradication of poverty. Majority of the families had no subsidiary occupations.

There is a great scope in the rural area, for promoting income generating activities. The above induced the investigator to take steps to establish a garment unit with a view to mobilise rural young women and train them in dress making. It was hoped the training would impart the required skills in them and enable them to produce garments which in turn might help them to become self-employed and earn an income also that might raise their living standards.

2. Selection of the sample

From the surrounding villages of Vivekanandapuram rural young girls between the age group of 15 to 22 years were mobilised and motivated to join the sewing programme. Their family background revealed they hailed from the low income group. Ten young girls, who were in their homes, after completing their studies from eighth standard to S.S.L.C. without any jobs, joined the programme and they showed a keen interest in learning tailoring. Since the candidates were ready, steps were undertaken to establish the garment unit.

3. Setting up the garment unit

At Vivekanandapuram, a small place which could accommodate five sewing machines was made available for
setting up the unit. It had a carpet area of 12 sq. metres.

The minimum equipment required for the tailoring unit were outlined. These included such non-consumable items as the sewing machines, shears, an electric iron and other related items needed for garment making and also certain consumable items as fabrics, needles, threads and fasteners. The list of items and the total amount required for a tailoring unit are given in Appendix XXII. The major items as the sewing machines, furniture required were collected on loan basis from the college. A few essential non-consumable items and most of the consumable items were purchased by the investigator. To enable the investigator to do the above, an advance amount of Rs.1500/- was granted by the authorities and this was made use of for the purchases, which later on was returned.

During December 1978, the tailoring unit was established at Vivekanandapuram. A technically qualified instructress was appointed for the purpose. The investigator gave instructions to the instructress as regards the implementation of the training programme and supervised the work every week.

4. Planning the educational programme

This included the framing of the following objectives:
a. To develop knowledge and skill in tailoring techniques in rural young women

b. To train them up for a vocation and enable them to earn an income by self employment

In January 1, 1979, the actual training programme was started with ten candidates (Plate VIII). The teaching programme was conducted for 30 hours per week. The training programme was conducted from January to June for six months. The course contents were outlined to suit the requirements of the candidates. A syllabus in garment making was framed which included basic sewing techniques and lessons on making selected garments. The formulated curriculum is given in Appendix XXIII.

5. Conducting the training programme

Since the trainees had no knowledge in tailoring, the course was started with lessons in the operation of sewing machine and in basic sewing techniques. At the outset simple garments such as the jabbas, knickers, panties, garments and furnishing items which involved straight stitching were taught. Gradually, other garments such as cholias, frocks, boy's shirt, and shorts were introduced in the training programme. Even though quite a few garments were taught, the candidates were made to undergo adequate training in making selected garments such as the sari, pettic coat, cholias, frocks, boy's shorts and furnishing items.
THE TAILORING UNIT IN ACTION IN THE RURAL SET UP AT VIVEKANANDAPURAM

PLATE VIII
For developing the needed skills, in making these garments as per the required standards, for production purposes, special efforts were undertaken, by adopting the repetition process in teaching on the part of the instructedress and in learning on the part of the candidates which gave them adequate confidence also in the job for which they were trained. The demonstration method was selected by the investigator for teaching since it is applicable in this area and is simple to understand. Moreover the demonstration provides the candidates an opportunity to see what exactly is done. Where students have to learn skills and carry out certain activities in a scientific and efficient manner, demonstrations prove to be very helpful. Considering the relative merits this method was selected for teaching the candidates.

s. Maintenance of records

Good record keeping is a fundamental requirement for the collection of scientific data. Therefore to obtain accurate details the following records were maintained during the training period.

1. Attendance records

Records for attendance were maintained for the candidates and for the instructedress with a view to assess the regularity of candidates in the educational programme.
ii. **Stock records**

Separate records were kept for consumable items such as fabrics, paper, thread etc. and for non-consumable items such as shears, bobbin cases, metre scales and other items.

iii. **Contingency register**

A record was maintained for all the expenditure incurred for different items, both consumable and non-consumable, classified under different heads.

iv. **Lesson plans**

The instructedress was asked to follow the framed curriculum, and make suitable lesson plans, in advance, and show the investigator.

v. **Assessment of candidates**

The record for assessment of candidates from time to time in their progress was maintained.

The above records enabled the investigator to collect scientific information in regard to the vocational training programme.
D. **Evaluating the garment unit with reference to the training and production aspects**

The aspect included the following procedures.

1. **Evaluation of the training programme**
2. **The production programme**
3. **Maintenance of records**
4. **Evaluation of the production unit**
5. **Evaluation of petticoats**

**1. Evaluation of the training programme**

Evaluation procedures are used continually in the systematic approach to education. (Brown et al., 1977).

The evaluation phase of the study is the time for students to take stock, to see what they have learned or to understand how they have changed as the results of the study. Considering the importance of evaluation in extension education programmes, the following procedures were adopted.

**a. Evaluation of the finished garments**

A proforma was prepared by the investigator to evaluate the finished garments by ten judges who had good knowledge in clothing construction. The proforma consisted of such details as general appearance, construction aspects such as seam, hem, band and placket and it was suitably designed to evaluate the candidates' performance so far as the preliminary garments, petticoats and blouses were concerned. The proforma is given in Appendix XXIV. The finished garments
were shown to ten judges after one month's training, and again after four months' training the progress made by the candidates was ascertained.

b. Self assessment of candidates

A rating scale was prepared by the investigator to evaluate the interest, knowledge and skill of the students. The rating scale is given in Appendix XXV and the results are presented in Chapter IV, Results and Discussion.

2. The production programme

Collection of orders

In July 1979, the production of garments was commenced by which time the candidates had completed six months training, and had become confident enough to accept orders and produce women's and children's wear. Efforts were undertaken by the investigator to canvas orders from different sources, such as Khadi and Village Industries Commission (KVIC), National Textile Corporation (NTC). Schools, hospitals and nurseries. Out of these the NTC agreed to give their seconds' materials and cut pieces for making petticoats and frocks, considering the fact that it was an income generating programme in a rural area. Suitable fabrics for the above readymade garments were selected and brought to the institution.
Within a short period, the trainees were expected to produce quite a few garments. Hence the trainees were bought to the campus and they were provided with the sewing machines of the institution and technical guidance to meet the urgent requirements of the NGO. This proved to be a real working experience for the trainees. (Plates IX and X). On completion of the undertaken work the candidates returned to Vivekanandapuram with greater confidence and changed outlook. From time to time consignments of second materials were provided by NGO for making petticoats. These were sent to the tailoring unit at Vivekanandapuram. As regards the construction procedures, sizes required, and style matters, instructions were given and the garments were made at the workshop.

The work in the tailoring unit was conducted on a cooperative basis. The processes included cutting the pieces, assembling, stitching and completing the garments. The fabrics were cut for the gored skirts for different sizes in a massive scale by using standard blocks. Depending on their experience and confidence the trainees did either straight stitching or constructed the bottom frill and waist band. On completion the garments were sealed and pressed and they were returned to the institute. These were checked for quality and standards and despatched to the marketing section of NGO. (Plate XI). This formed a regular feature of the tailoring unit and the charges for making the garments were paid to the institute by NGO.
TRAINNEES AT THE CAMPUS MAKING GARMENTS
PETTICOATS AND FROCKS SEALED AND Pressed BY THE CANDIDATES IN THE CAMPUS

PLATE X
PETTICOATS READY TO BE DESPATCHED TO NTC
Besides the above, local orders from the surrounding villages were accepted and done. Also the orders that could be mobilised from the campus were passed on to the tailoring unit. To feed the tailoring unit during the slack period fabrics such as poplin, cambric, longcloth and khadi chints and plain varieties were purchased and sent for making different types of garments, particularly frocks and petticoats. A set of designed frocks for preschool girls and dresses with self help features made by the trainees are shown in Plates XII and XIII.
A set of designed frocks for preschool girls

Plate. XII
DRESSES EASY TO PUT ON EASY TO TAKE OFF - STITCHED BY TRAINEES

PLATE XIII