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ABSTRACT

This booklet, prepared for the Peace Corps, describes the operation of the Volunteer Rehabilitation Project, a handicraft project for handicapped persons (mostly leprosy patients) in Ethiopia. Along with the project description are step-by-step instructions for carrying out a similar project and a discussion of the principles underlying the operation of the project. The report is organized into six sections. The first section is an introduction that provides an overview of the project, describes its main areas of operation, and suggests future directions the project may take. The second section describes the type of training provided to the workers. A step-by-step guide for some sample tasks is included. In the fourth section, the relationship of the project and the public is discussed, with directions for public relations and a procedure for creating a sales brochure. Section 5 focuses on production and salaries, while recordkeeping is the subject of the final section. A list of suggested resource publications is included in the report.  
 (KC)

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# Peace Corps

GUIDELINES  
FOR  
DEVELOPMENT OF A HOME INDUSTRY

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PEACE CORPS  
INFORMATION COLLECTION AND EXCHANGE  
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Volunteer Rehabilitation Project  
P.O. Box 165  
Addis Ababa, Ethiopia  
June, 1975

Dear Reader;

This book attempts to describe the operations of the Volunteer Rehabilitation Project (VRE), a handicraft project for handicapped persons (mostly leprosy patients) in Ethiopia.

Our aims in producing this book are two-fold.

For our own purposes, the assembling of this information greatly facilitates the standardization of operating procedures and serves to more easily acquaint new-comers to the project with various systems used.

And, we recognize our responsibility to share what we have learned with others involved and interested in reaching the same goal:

Of helping to establish a setting in which handicapped persons can, by modifying known skills and learning new skills, earn a living wage; thereby allowing handicapped persons to be economically self-sufficient members of society.

The materials in this booklet have not been copyrighted. Persons wishing to translate it into other languages are encouraged to do so. We request that copies of translated material be sent to us - it will be valuable for our international visitors. If the contents are reproduced (in whatever language) we ask that credit be given to ALERT, since it is through their assistance and resources that copies of this booklet are available for distribution.

We hope that the information contained here will be useful to you. We will very much appreciate any comments, advice and other forms of communication we receive from readers of this book.

Sincerely,  
Volunteer Rehabilitation Project

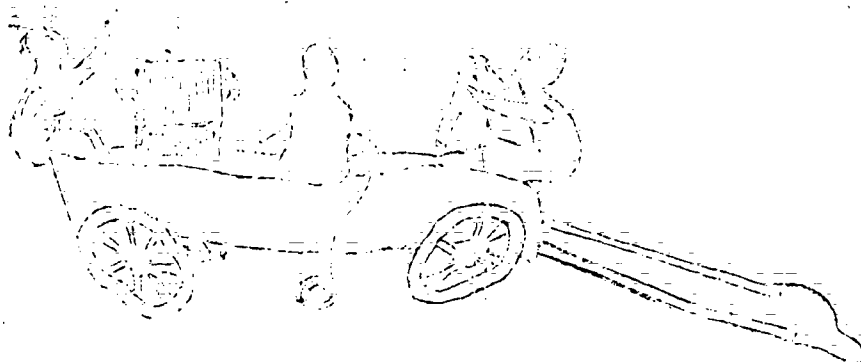
## DEDICATION AND ACKNOWLEDGMENTS

A handicraft project for handicapped persons is a very fragile entity when viewed in the context of national and world economy.

The survival of this project is due to the talent, support and commitment of individuals and agencies too numerous to mention here. It is thanks to the efforts of these interested people that this fragile entity does exist.

This book is dedicated to all those who have believed in the aims of VRE and have acted supportively on that belief.

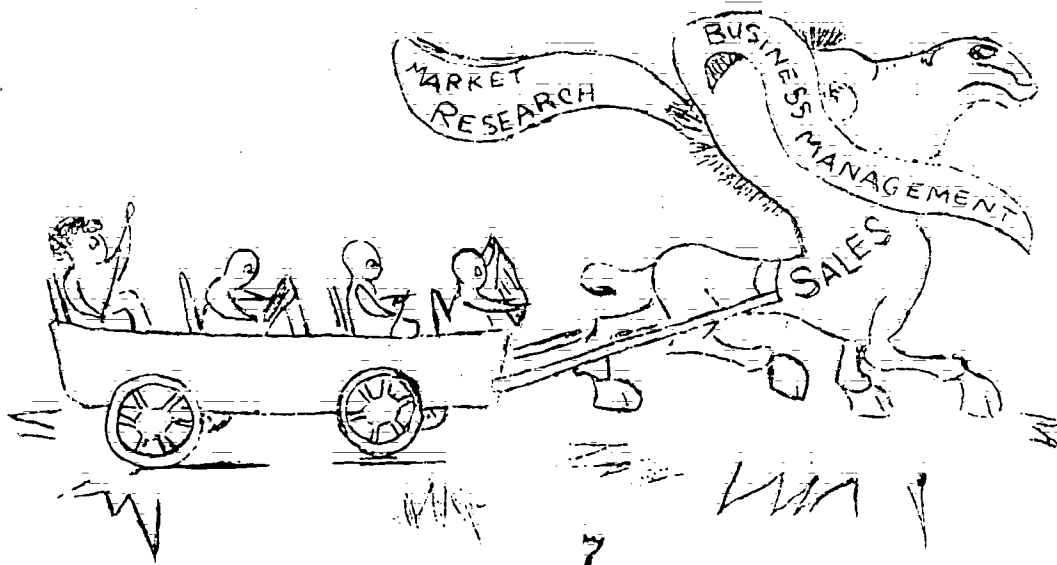




### PRINCIPLES

During the life of the project, certain principles have developed which are recurrent themes in this book. For your convenience, they are summarized here.

- I. Training is useful only if the trained can be assured of regular employment and a cash income upon completion of training. (What a person is trained to do should be determined through thorough market research.)
  - A. Any training course should emphasize the abilities of the participants (rather than their disabilities).
  - B. Any training course should encourage workers towards responsibility and self-sufficiency in the work situation.
- II. The level of sales determines the level of production.
  - A. The level of sales is determined by the appropriateness and quality of the product.
  - B. Quality standards and other information must be mutually understood by management and labor.
- III. The circulation of money and goods is maintained by the application of business management skills. Thorough record keeping provides information on which to base decisions.



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SECTION ONE - INTRODUCTION

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- F. Circulation
- G. Finances
- H. Language

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- A. Aspects of Marketing
- B. Aspects of Production
- C. Aspects of Training

III. The Future of the Project

- A. Present Emphasis
- B. Planned Direction
- C. Influences

## I. OVERVIEW

### A. Background

The project began in 1970 as a means of providing an income for a few destitute women with dependent children by teaching them a marketable skill. These women were able to overcome their physical handicaps and learn to crochet and to produce beautifully embroidered clothing. However, because of the prevailing negative attitude towards leprosy in Ethiopia, learning these skills did not provide rehabilitation for their social handicap. They could not return to their home villages and turn their skills into a cash income, nor could they afford to purchase raw materials to make these items.

The project has expanded to provide raw materials (purchased locally whenever possible), production and design supervision and marketing services for the increased number of participants, male and female. During the five years of the project's existence, the number of craftsmen accepted and trained has reached 200. These people are former or current patients of Princess Tenebework Hospital located in Addis Ababa, capital city of Ethiopia, and some are members of patients' families. Princess Tenebework Hospital is the home of ALERT (All Aired Leprosy Rehabilitation and Training Center).

### B. Products

The craftsmen of VRP produce a variety of handmade items which sell primarily to the foreign community living in Addis Ababa. Most of the products are standardized, that is they are made in standard sizes and designs. The products made by the project vary to adapt to the changing demands of the market, but the main areas of production are:

Hand-woven rugs and tapestries.

Knitted and crocheted items from hand-spun cotton.

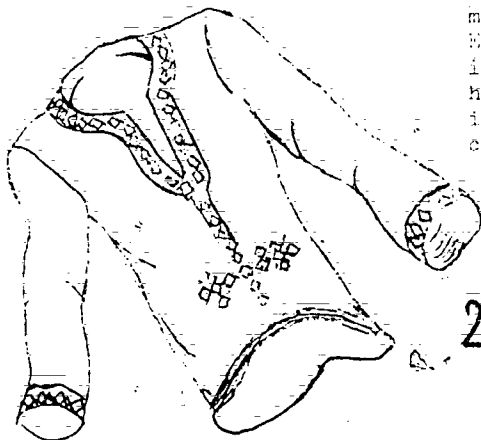
Hand-woven cotton fabrics.

Embroidered cotton clothing.

Towels, table linens, purses and other accessories.

Stuffed toys.

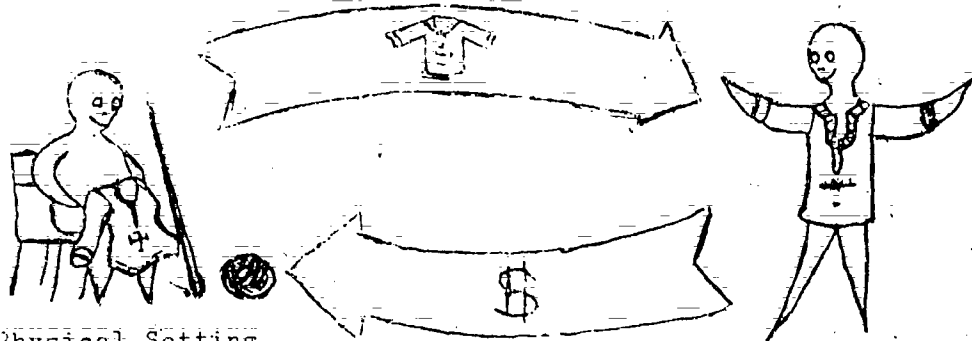
Baskets.



The products reflect a blend of modern design ideas and traditional Ethiopian styles. The 'trademark' item is a tunic (shirt) made from hand-woven cotton and embroidered in a variety of patterns and color combinations.

C. Management

The project has been administered by a series of women, all non-Ethiopian but one and all working in a volunteer capacity. Presently guiding the project are a dozen women who work part or full-time as unpaid managers, teachers and consultants. The aim of these volunteers is to coordinate the skills and work habits of one group of people (the craftsmen) and the interests and buying habits of another group of people (the buyers) so as to provide a living wage for the craftsmen.



D. Physical Setting

Of the 90 paid participants of the project, roughly 2/3 work in their homes, coming to the project center to take supplies and return completed work. The remaining 1/3 work in space provided by the project. The physical facility consists of:

1. Three rooms and one small building located on the ALERT compound and made available to VRP at no cost. The rooms are used for teaching, distribution and acceptance of work, storage and office space. The building is used as a shop where customers may buy products of VRP and other rehabilitation projects.
2. A house in the nearby village rented by the project. The house provides workspace for the carpet weavers and facilities for washing the cloth and yarn products. Later other sections of the production unit will move there.

E. Equipment

Most of the following items have been purchased by the project using donated funds. Some have been given to the project and other items are borrowed.

Sewing Machines (non-electric).....	5
Fabric Loom.....	1
Adding Machine.....	1
Carpet and tapestry looms.....	8
Miscellaneous furniture.	

## F. Circulation

The craftsmen are provided with raw materials and given training and instructions in what to make.

(see below, number 1)

The completed work is checked for quality and prepared for sale.

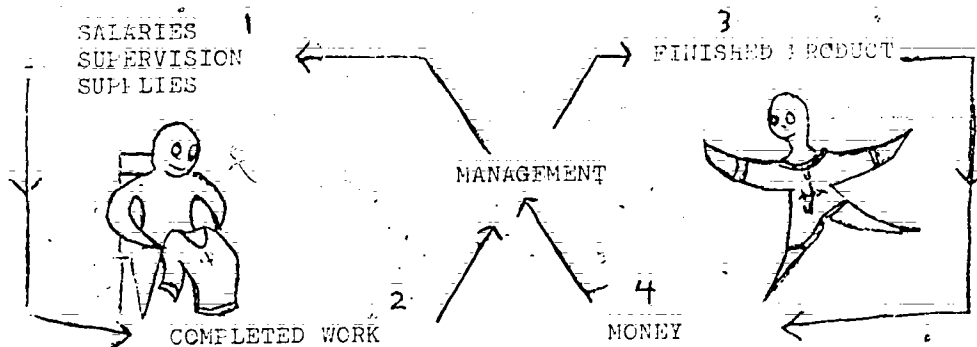
(see below, number 2)

Finished products are sold in a shop managed by the project on the ALERT compound and in other sales outlets in the city.

(see below, number 3)

Money from sales goes to pay salaries, purchase supplies and cover operating costs. Most workers are paid on a piecework system.

(see below, number 4)



## G. Finances

During 1974 the project took in between 58 and 59 thousand dollars; 93% in sales and 8% in gifts and donations. The project spent slightly less than that amount; 53% in salaries, 42% in supplies and the remainder to cover operating costs. (Because we do not pay administrative salaries and much of the work space is rent-free, the operating costs are unusually low.) There was a 'profit' of 600 dollars. These figures and all other monetary amounts in this book are expressed in Ethiopian dollars.

## H. Language

The volunteers presently working in the project represent seven nations. They use the language of English to communicate with each other. The participants represent several tribes and a variety of linguistic backgrounds and use the national language, Amharic, to communicate with each other. Some volunteers are studying Amharic and some participants have studied English in school (in the Ethiopian school system English instruction begins in grade 3).

About half a dozen individuals are sufficiently fluent in both languages to act as translators. These people are working together to standardize bi-lingual (Amharic and English) record keeping systems in the production/training unit.

II. MAIN AREAS OF OPERATION : MARKETING  
PRODUCTION  
TRAINING

A. Aspects of Marketing

1. Market research and public relations. (Knowing what the buyers want and letting them know that the items are available from the project).
2. Staffing and managing the main sales outlet for the project, the Craft Shop and arranging for some products to be sold in other sales outlets in the city.

The market influences all phases of the project because it is mainly money from sales which provides funds to purchase supplies, pay salaries and cover operating costs and training expenses. The preferences of the buyers determine the types of items produced and their designs. The level of sales determines the level of production.

B. Aspects of Production

1. Establishing a production schedule based on sales and communicating instructions to craftsmen.
2. Purchasing raw materials and distributing them to craftsmen.
3. Coordinating piecework salaries and quality standards to maintain strict quality control on products.
4. Preparing completed work for sale.

C. Aspects of Training

1. Selection and placement of trainees from within the project or from new applicants.
2. Providing materials, equipment, instruction and practice needed to allow trainees to learn the new skills.

In the past the emphasis of training was on taking new members into the project and teaching them a handicraft skill. From the administrative point of view, the project has reached a saturation point, and cannot expand in its present structure. At this time, the main teaching efforts are directed towards training participants already in the project to assume management responsibilities.

### III. THE FUTURE OF THE PROJECT

#### A. Present Emphasis

The goal of the VRF is to become an independent cottage industry. To continue progress in this direction, the volunteer now staffing the project are concentrating their efforts in these areas:

1. Completing the process of registering the project with the Ethiopian Government.
2. Training participants within the project to assume management responsibilities.
3. Increasing sales to build a working capital for the project.

#### B. Planned Direction

Though participants are being trained to assume responsibilities for management services now provided by volunteers, the overall administration of a project of this size and type requires professional skills in the areas of appropriate work allocation and business management. No new trainees can be accepted until the project receives assistance in the form of paid, professional staff.

The volunteers feel that training and production should operate separately, each unit managed by a paid, professional supervisor.

The training unit, managed by professional staff, could offer thorough screening services and specialized training programs tailored to the abilities of the persons selected. The production unit, supervised by a business manager/accountant team, could function as an independent business. Separation of the two units under professional staff would:

1. Relieve the production unit of the financial responsibility of training.
2. Allow the training unit to accept new applicants.

Graduates of the training program could be placed in the production unit as employees. This would complete the flow of trainees from training to employment and provide a model rehabilitation home industry.

The project could still receive volunteer assistance without being dependent on it.

#### C. Influences

Whether or not this division takes place depends upon several factors, the most critical of which are:

1. The status of the project after registration.
2. The granting of assistance in the form of staff or staff salaries (for a trial period) and a training budget from sources outside VRF.
3. The ability of the project to continue to adapt to the demands of the available market.

SECTION TWO - PROJECT PROFILE

I. The Project Center

- A. Services for Craftsmen
- B. Responsibilities of Project Center Staff

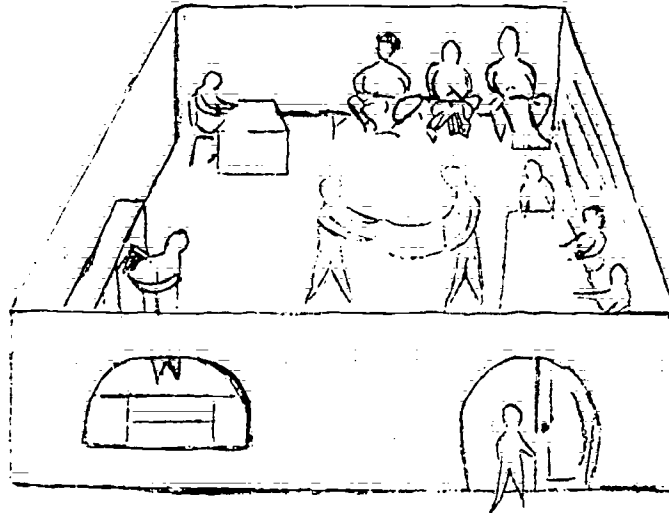
II. Information About Departments

- A. General
- B. Specific

III. People

- A. Available Information
- B. How to Assemble Information About a Group of People
- C. Social Welfare Programs

## I. THE PROJECT CENTER



The project center consists of a combination office/classroom and a storeroom.

### A. Services for Craftsmen

Craftsmen come to the project center to:

Receive raw materials and work instructions.

Return completed work.

Have work checked for quality specifications.

Receive payment for completed work.

Receive raw materials and instructions for continued production.

### B. Responsibilities of Project Center Staff

(Project center staff includes both volunteers and those participants who are performing management services.)

Purchasing raw materials.

Distributing materials to craftsmen.

Communicating instructions to craftsmen.

Maintaining quality standards.

Supervising salary payment.

Preparing finished products for sale.

Record keeping.



## II. INFORMATION ABOUT DEPARTMENTS

### A. General

The following information does not distinguish between part and full-time workers and students and independent workers. Several participants are multi-skilled. Each worker is listed by that work which is his or her major source of income. (The crochet department is not listed as it has recently been closed and its members absorbed into other departments.) Total participants, 40.

#### 1. Working in their homes:

10 spinners  
17 knitters  
30 embroiderers  
2 basket makers

#### 2. Working in space provided by the project:

11 sewing room workers  
1 design printer  
10 wool carpet and tapestry weavers  
1 cotton rug weaver  
1 cotton fabric weaver  
3 maintenance workers (laundry, etc.)  
4 student managers

### B. Specific

#### 1. Sewing Room

The sewing room is the most complex of the VRI departments because of the variety of operations performed there.

- a. Products: The workers in the sewing room make clothing, table linens, pillows, handbags, dolls and other toys. Some products are completed there and others are sent on to be prepared for the embroiderers. A few products return to the sewing room for handsewing or come in from other departments for linings.
- b. Tools and Materials: Most cloth items are made from buloko, heavy hand-woven cotton which is purchased in bulk. The buloko is made at a sister rehabilitation project which also employs former or current ALERT patients. Items are sewn on non-electric sewing machines.
- c. Patterns: The clothing patterns used previously were based on commercial sewing pattern sizes. The sewing room has recently changed to a small/medium/large size system for clothing. Patterns are made from cloth (the edges of which have been zig-zagged to prevent raveling) or from heavy paper.
- d. Quality Standards: Because of the nature of the buloko, it is essential that the cloth be cut exactly on the grain and sewn properly.

## 2. Drawing and Printing Department

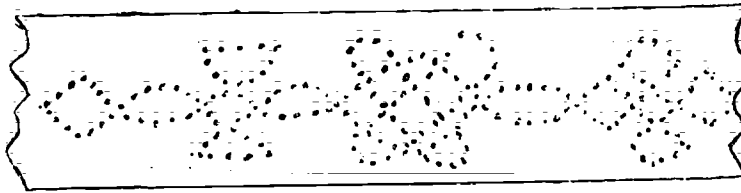
a. Products: In this department cloth items are prepared for the embroiderers. A variety of patterns and designs are outlined on partially sewn items in washable ink.

### b. Process:

Drawing - Straight line designs are drawn on cloth according to centimeter measurements.



Printing - A piece of plastic in which holes have been pricked to form a design is placed over the cloth. Ink is brushed over the plastic and seeps through the holes onto the cloth. The plastic is removed, leaving dot marks for the embroiderer to follow.



c. Quality Standards: Designs are checked for exactness of placement on the cloth, clarity of marking and general accuracy.

## 3. Embroidery Department

a. Products: Designs are embroidered on clothing, table linens, handbags, pillow covers and other items.

b. Tools and Materials: Embroiderers are given color patterns (done in water color paints and encased in plastic) which match the shape of the pre-marked designs on the cloth. They receive thread in colors which match the color pattern.

c. Process: Two kinds of stitches are used, a chain stitch for designs and a blanket stitch for edging. Embroidery is a traditional Ethiopian art.

d. Quality Standards: Finished embroidery is checked for exactness in following design lines, exactness in reproducing the color pattern and evenness of stitch tension. VMI is planning to replace the water color designs with embroidered samples to give embroiderers more exact patterns to follow.

#### 4. Spinning Department

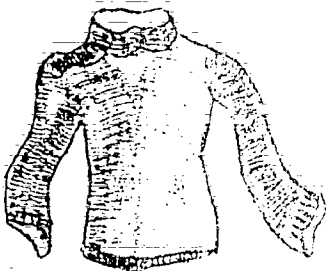
- a. Products: The spinners make handspun cotton yarn and are able to produce thick and thin varieties of yarn.
- b. Process: First, the seeds must be removed from the raw cotton. The strips of cotton are formed into yarn with one hand and wound around a wooden spool held in the other hand. Cotton spinning is a traditional Ethiopian art.



Quality Standards: The finished yarn must be without seed fragments and evenly spun to avoid breaking and weak spots. The spinners must watch for discolored portions of cotton which when spun will become more discolored, decreasing the sale value of items made from the cotton yarn.

#### 5. Knitting Department

- a. Products: The knitters make socks and pull-over sweaters for adults and children.
- b. Materials: The products are knitted from hand-spun cotton yarn made by the spinners combined with a commercially made cotton thread to add strength and prevent stretching.



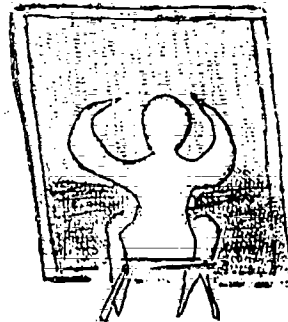
Quality Standards: The finished items must conform to size measurements and be knitted evenly. In the case of sweaters the armhole and shoulder seams and button holes are also checked. The knitters must watch for discolored yarn (which sometimes escapes the notice of the spinners).

#### 6. Wool Carpet and Tapestry Department

- a. Products: The carpet weavers produce six sizes of rugs bearing three basic designs. Color variety depends on available wool. In addition to standard sizes, very large carpets are woven to special order sizes.
- b. Tools and Materials: The weavers use local wool and heavy cotton warp. They work at upright metal looms.
- c. Process: A traditional Ethiopian flat-weaving process (squamak) is used.
- d. Quality Standards: Rugs and tapestries must meet measurement standards for size, shape and symmetry of design.

#### 7. Cotton Rug Weaver

The cotton rug weaver produces two sizes of rug. He uses lightweight cotton warp on a metal loom and the same weaving process as the wool weaver. The cloth strips which he uses are prepared in the weaving room. Type of cloth and color depends on available supplies.



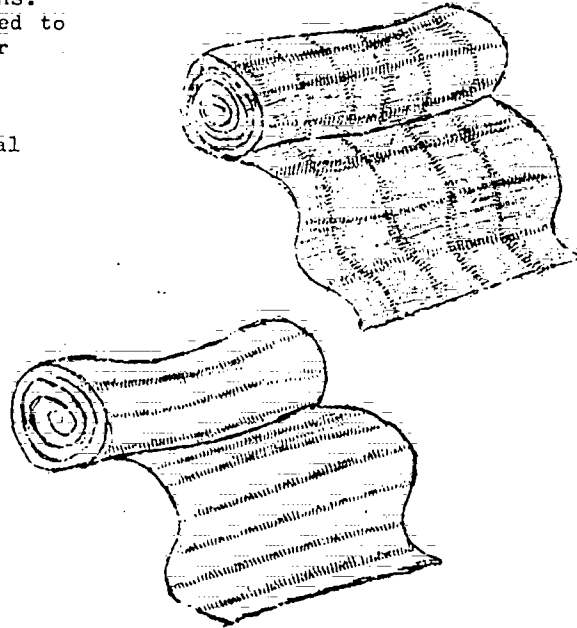
8. Cotton Fabric Weaver

The cotton fabric weaver was trained at the Awassa Training Center, Hand-loom Section in Awassa, Ethiopia. He is able to produce several varieties of cloth weights and designs. Some of his cloth is used to make VRF products, other pieces are sold by the meter.

Using a three-dimensional fabric loom, he applies traditional Ethiopian cloth weaving skills.

The finished cloth is examined for quality of weave and symmetry of design.

It is measured for total number of meters.

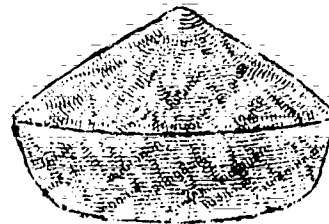
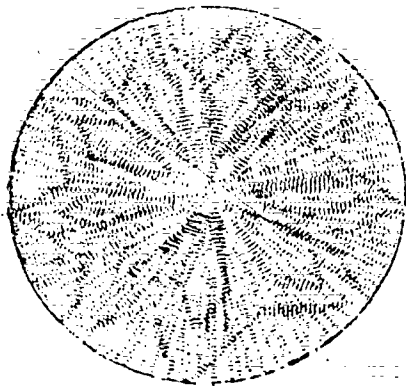
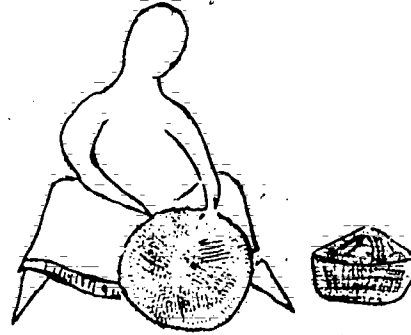


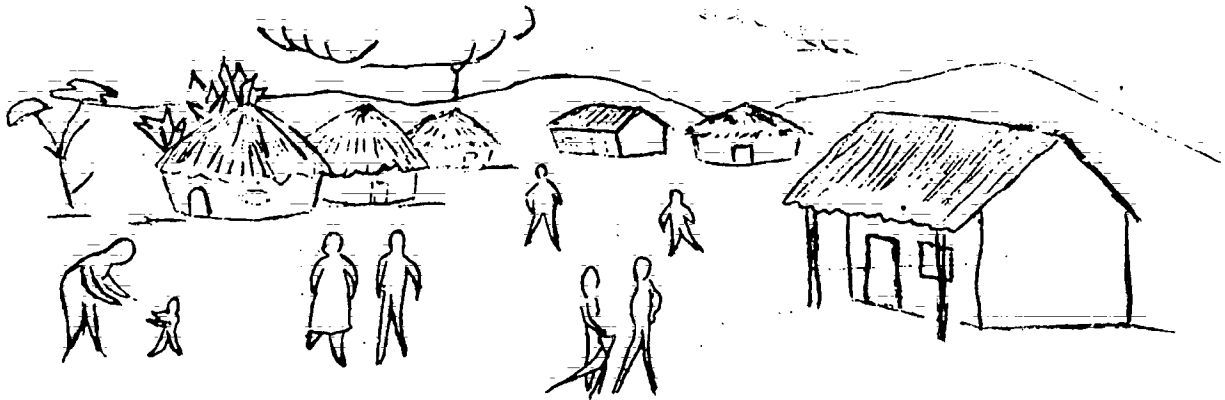
9. Basket Makers

The basket makers produce small, round covered baskets and large, round woven trays.

They purchase their own grasses, using both dyed and natural shades. They use metal needles and traditional processes to produce the woven items.

Finished products are checked for evenness of weave and symmetry of shape and color design.





### III. PEOPLE

Ethiopia has an estimated population of 26 million persons. Though figures vary, an estimated 1% of the population, or 260,000 have leprosy. ALERT at Princess Zenebeworq Hospital is one of the centers where the disease of leprosy is being researched and treated.

A village has sprung up outside the ALERT compound called Addis Keteme (New Town). Its residents (4-5 thousand persons) are former and current ALERT patients and their families. Most of the VRP participants and their families live in Addis Keteme. They have become part of VRP by referral through the ALERT social work department or through other ALERT personnel. Not all referrals can be accepted. There is now a waiting list of over 200 persons. The disadvantage which leprosy patients face in finding work is even more significant when considered in the context of the general unemployment problem in the Addis Ababa area.

#### A. Available Information

1. Information About Individuals: In 1974 a volunteer staff member accompanied by a bi-lingual participant visited the homes of all workers and interviewed them. The information collected was organized on cards and the cards were grouped by department. The cards looked something like this:

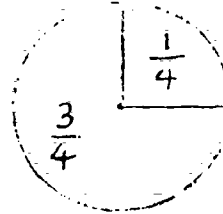
NAME	
SEX	
AGE	
LEPROSY/NON LEPROSY	
PROVINCE OF ORIGIN	
LENGTH OF TIME IN ADDIS ABABA	
MARRIED/SINGLE	
CHILDREN/OTHER DEPENDENTS	
JOINED PROJECT WHEN?	
EDUCATION	
OTHER	PRESENT WORK

2. Information About VRF Participants as a Group:

At present there is no volunteer staff member qualified to describe the project participants with medical or sociological accuracy. In addition, the available information is in need of up-dating. The statements which follow are general and are not meant to represent professional statistical research.

a. Medical Information:

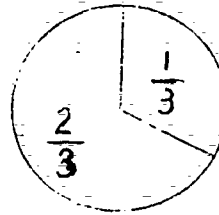
- 1.) Participants with leprosy..... $\frac{3}{4}$
- Participants without leprosy.... $\frac{1}{4}$



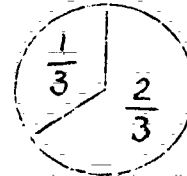
- 2.) Roughly 20% of the participants have physical handicaps which significantly limit the kind of work they can do within the project, and any participants with visible signs of leprosy would have difficulty securing employment outside of a sheltered workshop of this kind.

b. Personal Information:

- 1.) Age:  
  - Twenty years or older..... $\frac{2}{3}$
  - Nineteen years or younger..... $\frac{1}{3}$



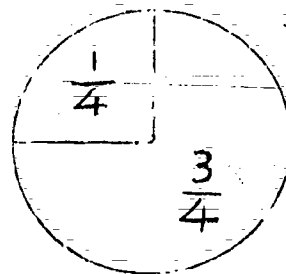
- 2.) Sex:  
  - Female..... $\frac{2}{3}$
  - Male..... $\frac{1}{3}$



- 3.) Family:  

There are slightly more single persons than married persons working in the project. The number of dependents supported by each craftsman is difficult to determine accurately because of the complexities of the Ethiopian family living unit and instances where more than one family member is employed, but estimating from the available information, craftsmen support an average minimum of two dependents each. This means that project sales effect the economic condition of at least 270 persons. Thoroughly studied, the number would probably be much higher.

- 4.) Education:  
  - Less than fourth grade..... $\frac{3}{4}$
  - Fourth grade or more..... $\frac{1}{4}$



**B. How to Assemble Information About a Group of People**

1. The steps below show how the information found on the preceding page was gathered and organized.
  - a. Decide what information is needed.
  - b. Collect information about individuals.
  - c. Make a chart with categories or columns for information.
  - d. Transfer information about individuals to the chart.  
(This puts the information in a form that can be seen all at once.)
  - e. Examine the chart and use the collected information to form conclusions about the group of people, based on the original need.
  - f. Make changes in the format and collect more information if necessary.

2. To demonstrate these steps, an example project will be used.

Project Example is a sheltered workshop which has 50 participants. The project produces baskets, woven cloth and clay dishes. Some of the workers are handicapped by leprosy and some by tuberculosis. The manager of Project Example, Ato Micael (Ato is the Amharic equivalent of Mr.) is new. He wants to find out more about his employees. He discovers that all the personnel records are lost. Ato Micael must collect the information again and compile it.

a. Ato Micael wants to know these things about his workers:

- How many are male and how many are female?
- How many are twenty or older?  
nineteen or younger?
- How much education have the workers had?
- How many have leprosy? Tuberculosis?
- What is the total number of dependents supported by the project? The average per craftsman?

b. Ato Micael decides to make a new information form and to interview workers to collect information about individuals. He wants to know these things about each one:

- 1.) Name
- 2.) Sex
- 3.) Age
- 4.) Family Information
- 5.) Education
- 6.) Previous Work
- 7.) Other Training
- 8.) Length of Time with Project
- 9.) Present Work / Department
- 10.) Other Skills Known Within Project
- 11.) General Health
- 12.) Specific Handicap
- 13.) Type of Work Recommended for This Person
- 14.) Type of Work to be Avoided



The wording of these items will vary with the language in which the interviewing is done. If the interviewing and record keeping are in different languages, research is needed to coordinate meanings of the two language patterns.

Ato Micael interviews the first worker and finds that it takes about 15 minutes. If each interview takes 15 minutes and there are fifty workers, the interview process will take about 750 minutes, or 12½ hours. Ato Micael plans two and a half days for interviewing and half a day for transferring the information to the chart he will use to organize his findings.



- c. After an information card has been completed for each individual, Ato Micael makes a chart which looks like this:

	(SEX)		(AGE)		(EDUCATION)			(HANDICAP) (FAMILY)		
	M	F	19-	20+	0-4	5-8	9+	LEP	TB	DEPS.
Workers										
Totals										

1. He looks at the information card for the first worker. He sees that the worker is a woman (item #2) who is 26 years old (item #3). She supports her mother and two children (item #4). She has been to sixth grade (item #5) and is being treated for leprosy (item #12).
  2. He transfers this information to the chart he has made. To save himself time in addition, he uses a tally mark system. (1=/, 2=//, 3=///, 4=////, 5=777, 10=7777777777)
- The information from the first card looks like this:

	M	F	19-	20+	0-4	5-8	9+	LEP	TB	DEPS.
Workers		/		/		/		/		///
Totals										

Ato Micael continues to make tally marks on the chart which represent information from the cards. In this way he records the sex, age, education level, handicap type and number of dependents for each of the fifty workers.



c. When Ato Micael completes his tally process, he adds the marks to find the totals. His totals are shown below.

Sex: Male - 30 persons  
Female - 20 persons

Age: Nineteen years or younger - 10 persons  
Twenty years or older - 40 persons

Education: Fourth grade or less - 35 persons  
Fifth grade to eighth grade - 10 persons  
Ninth grade or more - 5 persons

Handicap: Leprosy - 20 persons  
Tuberculosis - 30 persons

Family: 150 dependent persons (financially dependent on craftsmens salaries. This number does not include workers.)

These totals are expressed in numbers but they can also be expressed in fractions and percentages, as the chart below shows:

CATEGORIES	TOTALS		
	Numbers	Fractions	Percentages
Male	30	3/5	60%
Female	20	2/5	40%
19-	10	1/5	20%
20+	40	4/5	80%
0-4th	35	7/10	70%
5th-8th	10	2/10	20%
9th +	5	1/10	10%
Lep.	20	2/5	40%
T.B.	30	3/5	60%

Dependents: A total of 150 dependents, or an average of 3 dependents per salaried worker.

Now Ato Micael looks back at his original questions and refers to the chart above to answer them.

How many are male and how many are female?

How many are twenty or older? Nineteen or younger?

How much education have the workers had?

How many have leprosy? Tuberculosis?

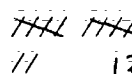
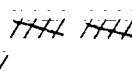
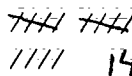
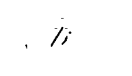
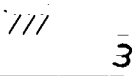
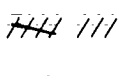
What is the total number of dependents (besides the craftsmen) supported by the project? The average per craftsman?

1. Kto Michael later decides that the information about the group is too general and he needs more specific information. He wants to know how many workers in each department are male and how many are female.

1.) He sorts the information cards into groups by department.

Basket makers - 23  
 Cloth weavers - 16  
 Potters - 11

2.) He makes a new chart and transfers the information in the same way as before except that he writes the totals in each box of the chart instead of at the bottom.

DEPARTMENTS	MALE	FEMALE
Basket makers	 12	 11
Cloth weavers	 14	 2
Potters	 3	 8

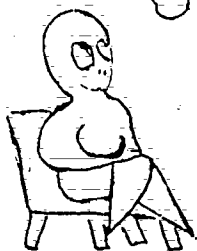
3.) To find other information and answers to other questions Kto Michael changes the top of the chart (information categories) and the side of the chart (grouping categories).

How many basket weavers have finished ninth grade?

How many cloth weavers are nineteen years old or younger?

Which department supports the most dependents?

How many women are leprosy patients?



C. Social Welfare Programs

1. Medical Treatment:

Participants who are or have been patients of ALERT receive free medical care from Princess Zenebeworq Hospital. One of the volunteers, a trained nurse, performs first aid treatment and is available to discuss medical problems and questions with participants. More serious cases are referred to ALERT medical staff.

2. Financial Assistance:

Participants have formed their own community loan society, as is customary in Ethiopia. In the past the project occasionally loaned money (at no interest) to participants, but this is no longer necessary.

3. Childcare:

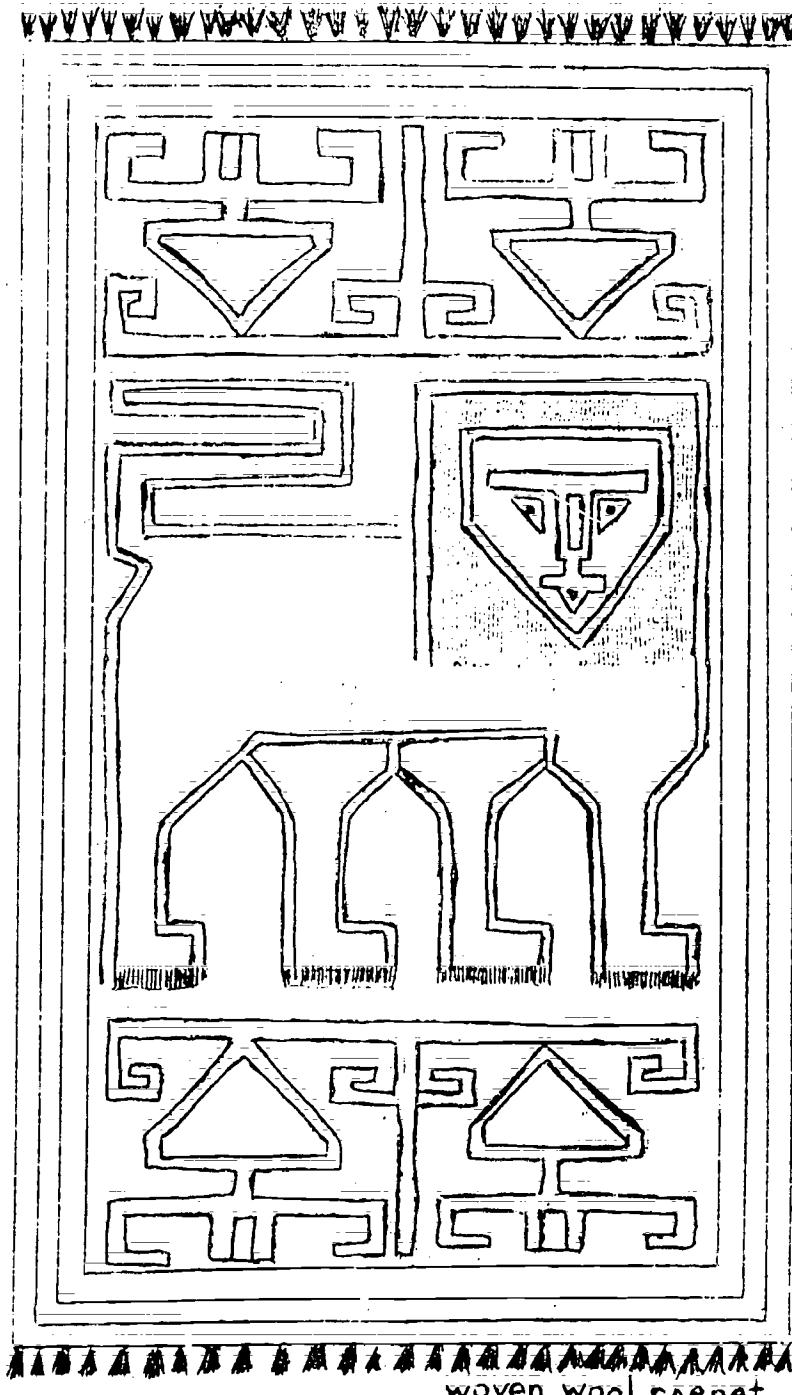
The volunteer nurse discusses childcare methods with mothers in the project and frequently visits the homes in which new babies have been born. In the earlier days of the project mothers with babies were give Fa Fa, a high nutrition baby cereal which was developed by the Ethiopian Nutrition Institute. As salaries stabilized and mothers could afford to purchase the Fa Fa, distribution was discontinued.

4. Education:

Two participants teach math and Amharic literacy classes at the project center two days per week. Attendance is voluntary.



cloth  
doll



woven wool carpet

SECTION THREE - TRAINING

- I. VRP Training Unit Considerations
  - A. Specific Need
  - B. Selection
  - C. Policy
  
- II. Types of Skills
  - A. Known Skills
  - B. New Skills
  
- III. General Methodology
  
- IV. Sequential Learning Steps for Sample Tasks
  - A. Learning to Cut Cloth Products
  - B. Learning to Machine Sew
  - C. Learning to Draw Designs
  - D. Learning to Print Designs
  - E. Learning to Embroider
  - F. Learning to Knit
  - G. Learning to Use Inventory Cards
  
- V. Considerations for Starting a Handicraft Project for Handicapped Persons
  - A. Describing the Project Administratively
  - B. Describing what the Project Will Do for Individuals
  - C. Market Research
  - D. Framework
  - E. Methodology
  - F. Policy
  - G. Budget

VRI AT PRESENT

Participants already trained in a handicraft skill and working with minimum supervision.....	76
Participants learning a handicraft skill.....	6
Participants learning a management skill:.....	8
	<u>90</u>

The six participants learning a handicraft skill receive instructions and materials as part of the production unit. They must meet the same quality standards as the trained craftsmen.

The eight participants learning management skills are already proficient in one or more handicraft skills and are now learning to take over various management responsibilities (work distribution, quality control, inventory etc.).

I. VRI Training Unit Considerations

- A. Specific Need: What kind of work needs to be done?  
What is an exact description of the task?  
Exactly what skills and abilities must the trainee already have to learn this new work?

Example: Cutting requires strong hands.  
Drawing requires a working knowledge of the metric system.  
Inventory work requires literacy in English and Amharic.

- B. Selection: What persons are available to learn the work.  
Of these persons, who possesses the necessary skills and abilities to learn the work?  
Of those who meet the work requirements, which person possesses the attitude and social behavior needed to help him succeed?

Example: Worker A and worker B are equally qualified to learn how to hand out work to others in their department. Worker B is older and more respected by other workers.

- C. Policy: By what methods, for how long and by whom will the trainee be taught?  
By what methods or standards will his work be evaluated?

### ii. Types of Skills:

VII participants are being trained in traditional craft skills (eg. spinning, weaving), contemporary craft skills (eg. machine sewing) and management skills (eg. preparing orders).

From the standpoint of training individuals to perform tasks, there are two main skill areas:

- A. Known Skills: The task requires a set of skills which the individual already knows, but which probably need some modification in design or quality specifications to become saleable.
- B. New Skills: The task requires a set of skills with which the individual has had no previous operational experience.

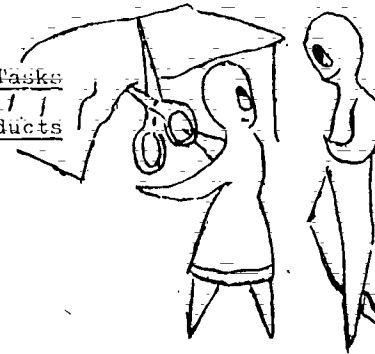
### iii. General Methodology Used in VII Training

Whether for a handicraft skill or a management skill, the basic teaching principles are the same. One trainee works with one teacher, communicating in the national language directly or through an interpreter. If knowledge of English is part of the work, that language is used. Depending on the skill, both participants and volunteers act as teachers. The trainee is given orientation information about the work and the purpose of doing it. The task itself is broken down to simple sequential steps. As the teacher explains and demonstrates each step, the trainee copies the process. An integral part of training is helping the trainee recognize, correct and learn from his mistakes. Practice of this type continues until the trainee can perform each step correctly under supervision. Then the trainee practices independently.

IV. Sequential Learning Steps for Sample Tasks

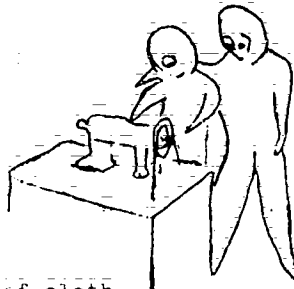
A. Learning to Cut Cloth for VM Products

1. Orientation to cloth types and weights, cloth fiber direction and identification of flaws.
2. Practice cutting straight strips of cloth on the grain.
3. Practice cutting strips of cloth on the bias (diagonally).
4. Orientation to reading the sewing room production schedule where the items to be cut each week are pictured accompanied by size symbols when necessary and a number which indicates how many are to be cut.
5. Practice in transferring information from the production schedule to the pattern box and selecting the correct pattern.
6. Demonstration of pattern assembly.
7. Practice in pattern placement, cloth cutting and dart marking.
8. Practice in work evaluation and recognition of mistakes. (Mistakes are corrected by re-cutting the cloth into a smaller item or into stuffing material.)



B. Learning to Machine Sew

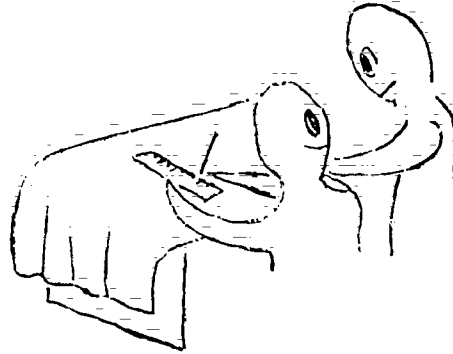
1. Orientation to the machine and its operation.
2. Practice sewing a straight line on one piece of cloth.
3. Practice lining up two pieces of cloth to have an even double edge.
4. Practice sewing two pieces of cloth together making straight and curved seams.
5. Practice sewing zig-zag edges on cloth to prevent raveling.
6. Sewing together simple two-dimensional items.
7. Orientation to how cloth pieces cut from patterns are assembled (steps vary with item).
8. Practice sewing complete items.
9. Practice evaluating work and correcting (re-sewing) mistakes.
10. Practice in simple sewing machine maintenance procedures.





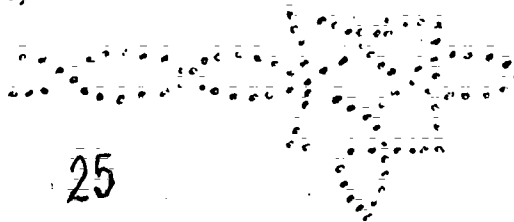
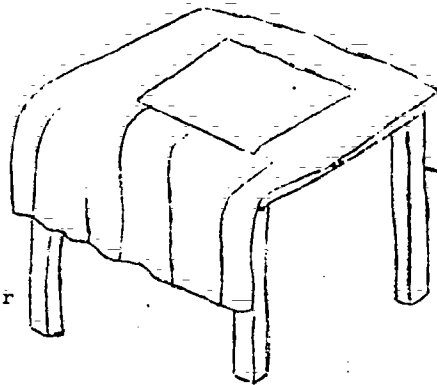
C. Learning to Draw Designs

1. Orientation to fabric and identifying the straight grain.
2. Practice reproducing the design on scrap cloth using a centimeter ruler. (Design must be placed along straight grain of fabric.)
3. Orientation to locating designs on various actual garments and other items. (eg. The cuff design of the tunic is a specific number of centimeters from the cuff edge. The design drawn on the collar involves a difficult curve of pattern.)
4. Practice in reproducing the straight line design on garments and other items.
5. Practice in evaluating work and correcting mistakes. (Mistakes are corrected by washing the cloth and re-drawing the design.)



D. Learning to Print Designs

1. Orientation to what printed design patterns are used for particular items.
2. Orientation to equipment (ink, plastic pattern and brush).
3. Practice placing the design (plastic card with holes in the shape of the design) properly on the cloth.
4. Practice mixing the ink to the proper consistency.
5. Practice using brush techniques to distribute the ink evenly over the plastic design, marking the cloth with dots.
6. Practice cleaning the plastic design after use.
7. Practice evaluating work and correcting mistakes. (Mistakes are corrected by washing the cloth and re-printing the design.)

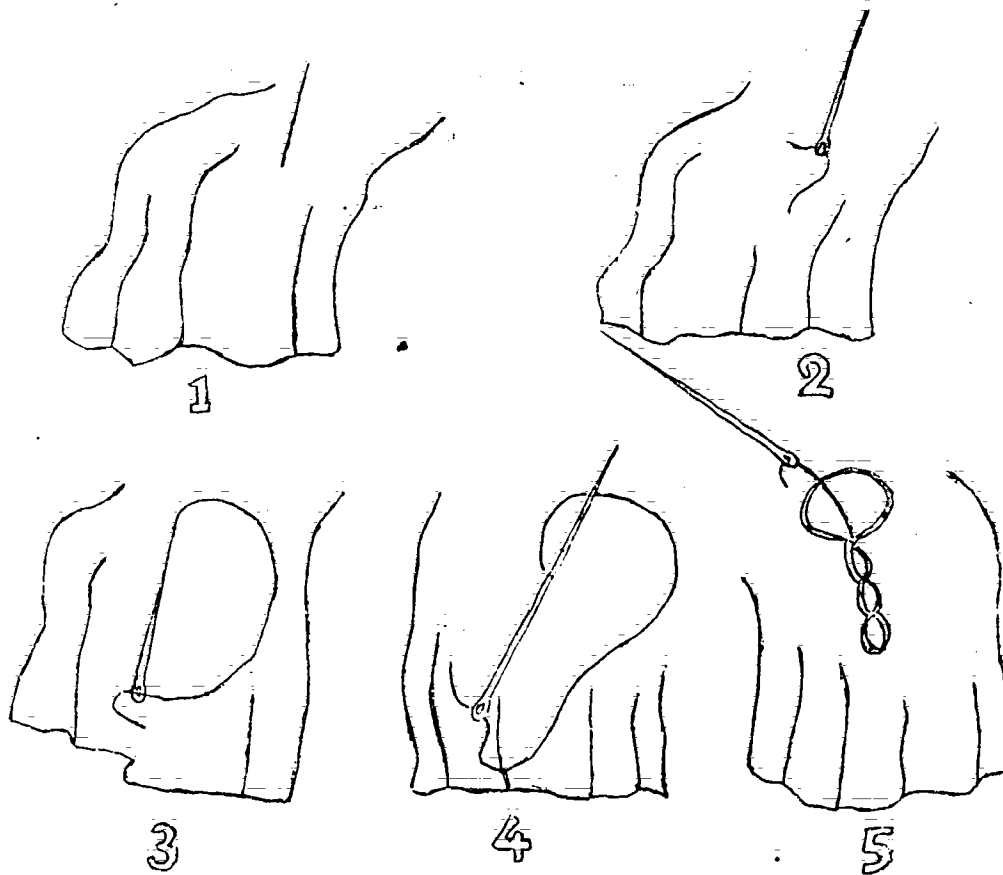


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Learn to Embroider

1. Instruction and practice in sewing the chain stitch (see below).
2. Practice sewing the chain stitch on a straight, drawn line.
3. Practice sewing additional chain stitch rows next to the first with no space between (filled embroidery).
4. Practice embroidering a strip four centimeters wide and a meter long with filled embroidery, matching the drawn lines and the assigned color pattern.
5. Practice evaluating and correcting mistakes. (Incorrect stitches are removed and the work re-done.)

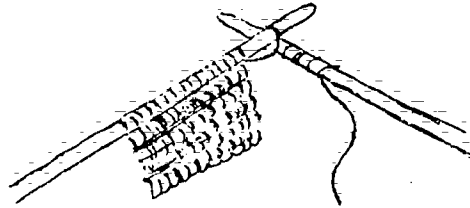


Embroiderers with advanced skills do a blanket stitch on the edges of the tunics. This stitch requires more expertise than the chain stitch. Each embroiderer has been individually fitted with a leather thimble to protect insensitive finger parts.

F. Learning to Knit

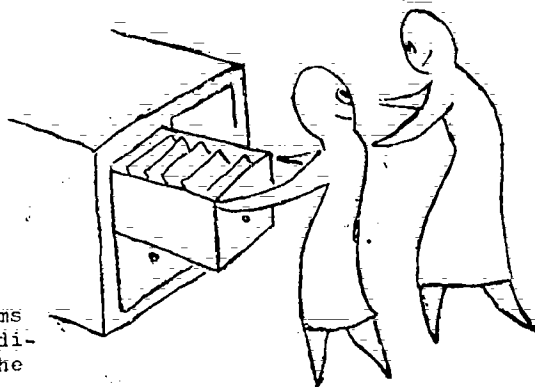
In order to learn to knit a sweater, the student first knits a practice patch on which he does all the kinds of knitting work he must know to make a sweater.

1. Practicing casting on stitches.
2. Practicing the knit stitch.
3. Practicing the pearl stitch.
4. Practicing rib knitting (knit and pearl combinations).
5. Practicing adding stitches.
6. Practicing decreasing stitches.
7. Making button holes.
8. Casting off stitches.
9. Making a sweater according to size specifications.
10. Sewing side and armhole seams.
11. Practice evaluating work and identifying mistakes. (Mistakes are corrected by unraveling the work and re-knitting the item.)



G. Learning to Use Inventory Cards (See page 51 for sample.)

1. Orientation to the inventory card and its purpose.
2. Orientation to the index for the inventory cards and the code number system.
3. Practice understanding the information on the card.
4. Practice removing items from the storeroom and indicating this action on the card.
5. Practice delivering items to the storeroom and indicating this action on the card.
6. Practice checking recorded totals with actual storeroom contents.



A working knowledge of the inventory system is a required skill for any trainee being considered as a candidate to learn how to prepare orders which go to the various sales outlets or how to distribute work to craftsmen.

V. Considerations in Starting a Handicraft Project for Handicapped Persons

A. Describing the Proposed Project Administratively

Is the proposed project to be a recognized part of a larger, more established rehabilitation effort?

A part of the larger effort on a trial basis?  
One which functions in isolation?

Will the proposed project be budgeted for under a super-structure?

Budgeted as an independent unit?  
Dependent on sales to cover expenses?

Temporarily subsidized?  
Permanently subsidized?

B. Describing What the Proposed Project Will Do for Individuals

1. Will the proposed project be primarily a training unit, a production unit or both?
2. Will the participants be taught handi-craft skills, management skills or both?
3. When an individual completes the course of training, what opportunity has he for continued employment? Where and how will he make a living by what he learns?

C. Market Research What can a particular group of Handicapped persons learn to do or make which will provide them with a regular income?

What are the traditional skills of the area?  
What skills and abilities are needed to produce these things?  
What materials are needed? Are they easily available?  
To whom do locally-made craft items sell?  
Is this a stable, growing or declining market?  
What is the competition from mass-produced items?

Could this particular group of handicapped persons learn to make these items as well as those already being made? As cheaply?

Could this particular group of handicapped persons sell these items for enough money to cover those project expenses not paid for through another source?

What sales outlets are available?  
Is exporting a realistic possibility?  
What are the legal aspects of selling handicraft items made by handicapped persons?

Are there other projects in the area with which the new project could work cooperatively in bulk purchase of supplies and use of sales outlets?

D. Framework

How many persons (supervisors, teachers and trainees) will make up the initial unit?  
What kind and size of space is needed for work, teaching, sales and storage?  
What tools, equipment and furniture are needed?  
What initial stock of consummable materials is needed?

E. Methodology

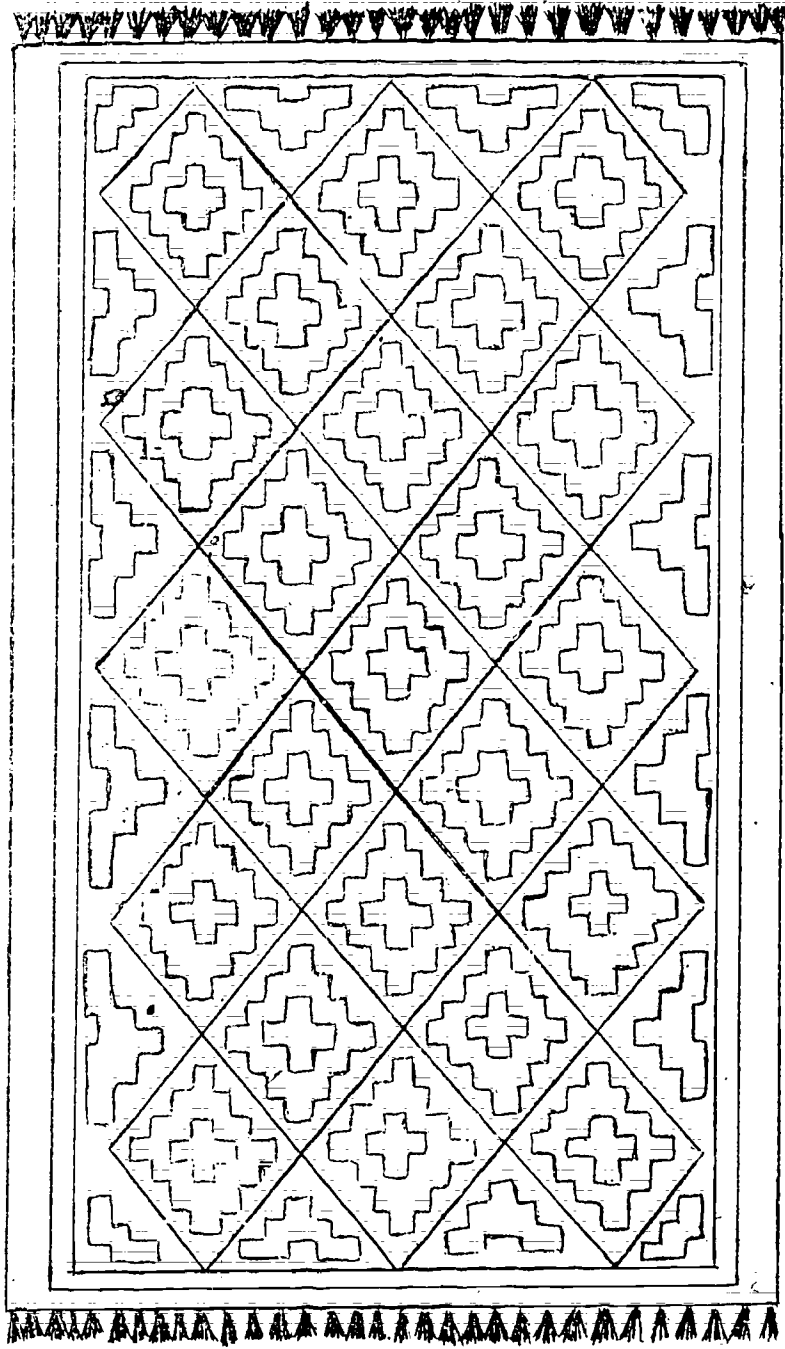
What are the work steps for performing each task and making each product which will be produced? (Task analysis.)  
What are the learning steps for learning to perform each task and make each item which will be produced?

F. Policy

What are the selection requirements (medical and other) for accepting applicants?  
What are the selection requirements for teachers?  
What is a complete job description (responsibilities) for management and supervisory positions?  
How will everyone in the project be supported / paid?  
What is the approximate time limit for learning each task and for teaching each group of trainees?  
By what quality standards will trainee work be evaluated?  
By what measuring methods will the success of the project be evaluated?

G. Budget

What will be the initial costs of starting this project?  
What will the operating costs of this project be?  
(Salaries, materials, overhead)  
What working capital is needed to support the project?



woven wool rug

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SECTION FOUR - THE PROJECT AND THE PUBLIC

I. Sales

- A. Craft Shop
- B. Other Sales Outlets
- C. Market Dependency

II. Public Relations

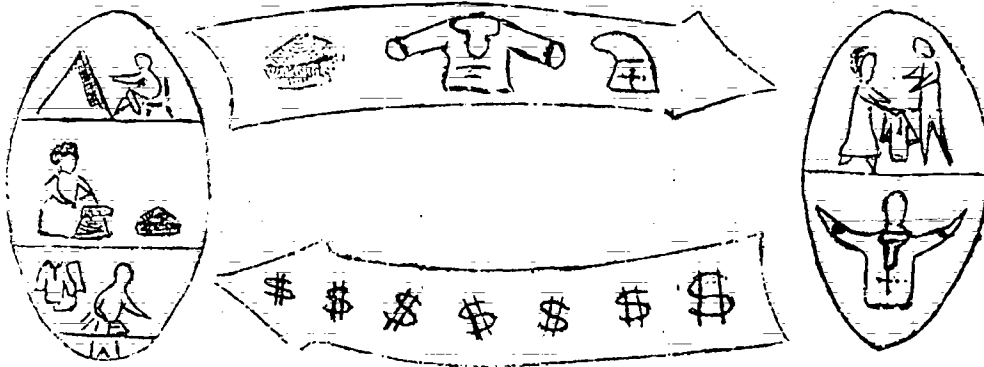
- A. Activities
- B. Printed Matter

III. How to Assemble a Photo Pamphlet for Printing

- A. Planning
- B. Practice Lay-Out
- C. Evaluation
- D. Printing
- E. Distribution

## THE PROJECT AND THE PUBLIC

VRP performs the obvious operation of offering finished products to the public in exchange for money which is used to provide craftsmen with work materials and salaries.



There is another, more subtle dimension of this relationship between VRP and the public. When buyers purchase VRP articles they are buying the work of handicapped persons. They are acknowledging that this work is equal in quality, usefulness, imagination and marketability to that of non-handicapped persons.

By selling the work of handicapped persons, a rehabilitation project communicates to the public in a tangible way the success of rehabilitation efforts.

### I. VRP SALES

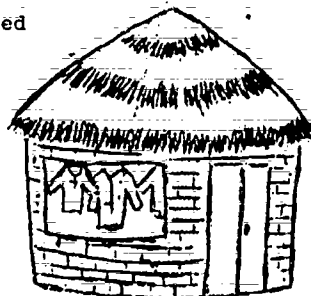
#### A. The Craft Shop

(The Craft Shop opened in 1973. Prior to that products were sold informally at social gatherings.)

The main sales outlet for VRP products is the Craft Shop, staffed and managed by volunteers and housed in a small Ethiopian style building on the ALERT compound.

Though the shop is located inconveniently far from the city center and open only 15 hours per week (due to staff shortage), the project and shop receive many visitors. Some come primarily interested in buying the products, others come to observe the teaching and working operations of the project. The proximity of the shop and the project center allows visitors to see the craftsmen's skills as well as their finished goods.

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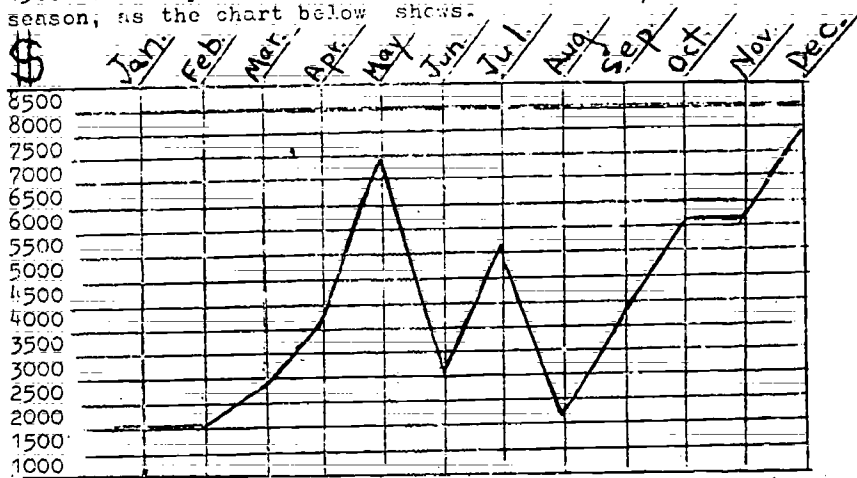


41



1. Craft Shop Sales

During 1974, sales of VRP products in the Craft Shop averaged 4500 dollars per month. Sales level is greatly effected by season, as the chart below shows.



2. Shop Contributors

Also dependent on Craft Shop sales to pay salaries and purchase supplies are three other leprosy rehabilitation groups whose participants are former or current ALERT patients. One weaves the fabric from which most VRP cloth products are made. VRP is their market. The other groups make embroidered and crocheted items. The Craft Shop is their main sales outlet.

Village Spinners and Weavers.....	62 persons
VRP Craftsmen.....	90 persons
Village Crocheters.....	12 persons
Dutch Rehabilitation Group.....	28 persons

192 persons

This means that 192 craftsmen and their families are dependent on Craft Shop sales for regular income.

Three other rehabilitation projects sell through the Craft Shop, but for them it is not a major outlet:

Medhane Alem Rehabilitation Center  
Addis Hiwot Resettlement Project  
Reception Center of the Rehabilitation Agency

3. Shop Management

Management of the Craft Shop involves:

- Coordinating a volunteer staff work schedule.
- Maintaining shop procedures ( inventory, record keeping).
- Providing customers with information about products and the projects where they were made.
- Communicating sales information and advice to the production unit.
- Shop arrangement and display.

B. Other VRP Sales Outlets:

1. Related Marketing Units:

VRP products are sold in a showroom which displays the goods of several rehabilitation handicraft projects and is managed by the Rehabilitation Agency. Other such cooperative sales efforts are planned.

2. Commercial Marketing Unit:

VRP products are sold in two commercial outlets in Addis Ababa; a large hotel and a clothing and gift boutique.

C. Market Dependency

At present most VRP customers are non-Ethiopian. This is because the products have been designed to appeal to foreigners who wish to buy travel souvenirs and gifts. Attracting the interest of this group of buyers has been profitable enough to allow the project to develop to its present state and achieve the goal of providing craftsmen with wages.

Though the VRP craftsmen are economically self-sufficient members of society, the money which pays their salaries does not come from the society in which they live. Volunteers now managing the project realize that continued dependency on non-Ethiopian buyers is dependence on an unstable market. (Exporting, because of the legal and financial complexities involved is not a realistic possibility for the immediate future.)

By selling the work of handicapped persons, a rehabilitation project communicated to the public in a tangible way the success of rehabilitation efforts:

In an attempt to attract Ethiopian buyers and further inform the Ethiopian public about the success of leprosy rehabilitation, VRP is gradually re-designing selected items to appeal specifically to Ethiopian tastes.

11. PUBLIC RELATIONS

In the early days of the VRP, the public was informed of the project and its work mainly by social contacts between volunteers and potential customers. As the project grew printed information was also used. Essential in the success of any public relations effort is identification of the target group and the kind of response wanted from them.

A. Activities

Bazaars, coffee gatherings, public speaking (at the invitation of interested clubs and other groups); fashion shows, open-house days at the project; etc.

B. Printed Matter

Miscellaneous handouts available at social activities and in the shop; a price tag bearing the name and location of the project.

### III. HOW TO ASSEMBLE A PHOTO FOR PRINTING

In 1975 a booklet was distributed by VRP. Its main purpose was to present the total picture of the project and answer the questions most commonly asked by interested outsiders. The booklet was 8 pages in length and contained 12 photographs with brief captions in Amharic and English.

For those wishing to know more about the preparation of publication, here are the general steps:

#### A. Planning

1. Determine who is to receive the booklet.

Who is the target group of this publication / who will be informed by it?

Make a list of these people.

2. Determine what the message will be.

What questions have members of the target group asked / what are the most important questions / what are the answers / How can the message be written into a comprehensive, meaningful whole?

Write the message down. If the booklet is to be bi-lingual, begin translation.

3. Determine what photos or drawings will be used to illustrate, demonstrate or verify the message.

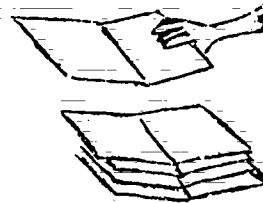
#### B. Practice Lay-Out

1. Determine the size and approximate number of pages for the booklet.

2. Make a paper booklet that size, with that many pages.

3. Experiment fitting the photos and sentences or captions onto the pages until you are satisfied.

4. Make a second booklet. Type the captions on separate pieces of paper. Tape them in place. Tape the photos in place.



#### C. Evaluation

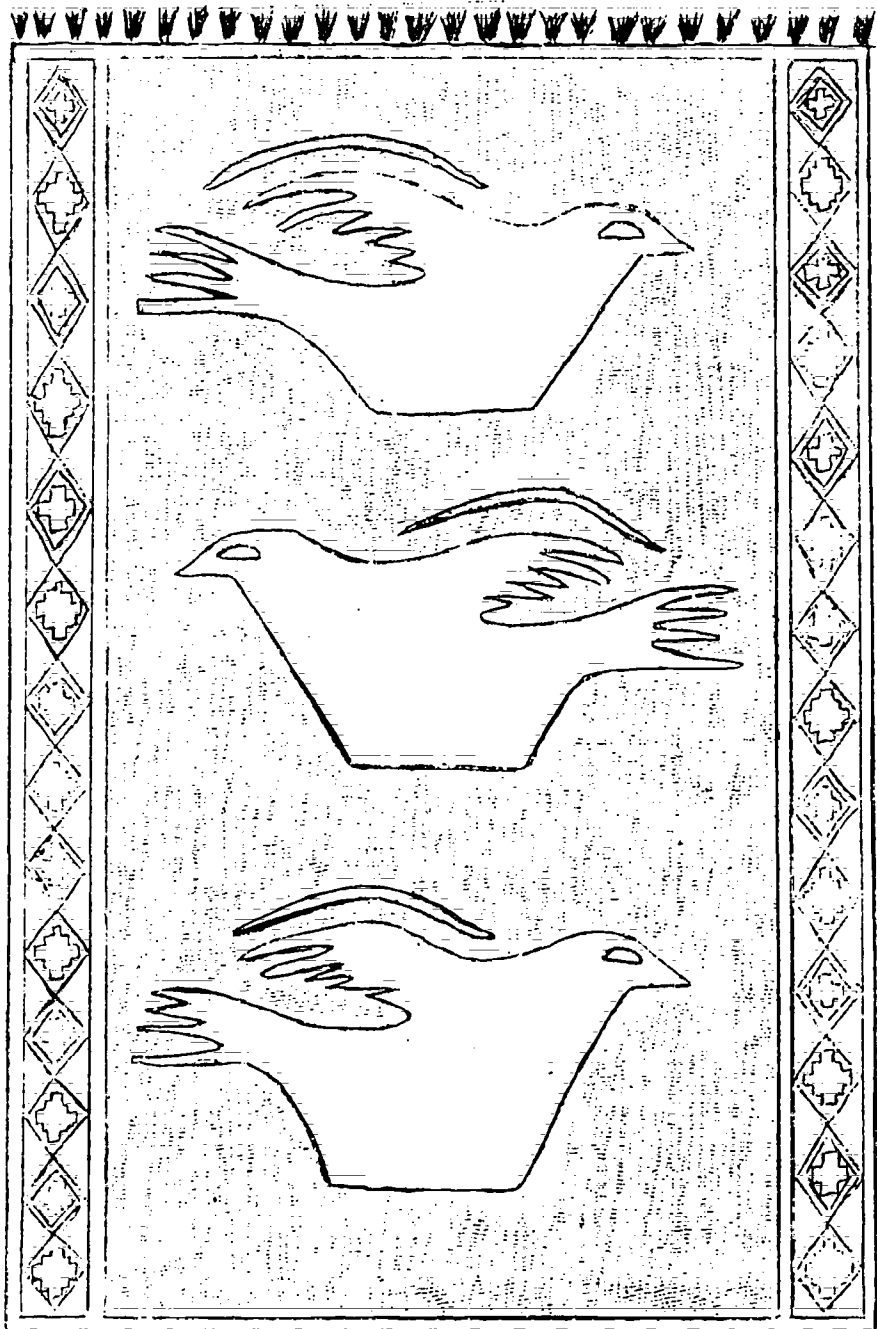
Show the model booklet to several people, those within the organization and those on the target reader list. Make any necessary changes or improvements.

#### D. Printing

Go to a printer and show him your model booklet. Ask for an estimate of printing costs. Discuss all details of the final lay-out process and the procedure for checking the final proofs.

#### E. Distribution

Return to the target reader list and make any changes and additions necessary. Determine how these persons will receive the booklet.



woven wool carpet

36

45

SECTION FIVE -- PRODUCTION

I. Regulating Production

- A. Necessary Information
- B. Drawing Conclusions
- C. Production Schedule
- D. Purchasing, Supply and Distribution

II. Accepting Completed Work

- A. Quality Control
- B. Salaries

III. How to Determine Piecework Salaries

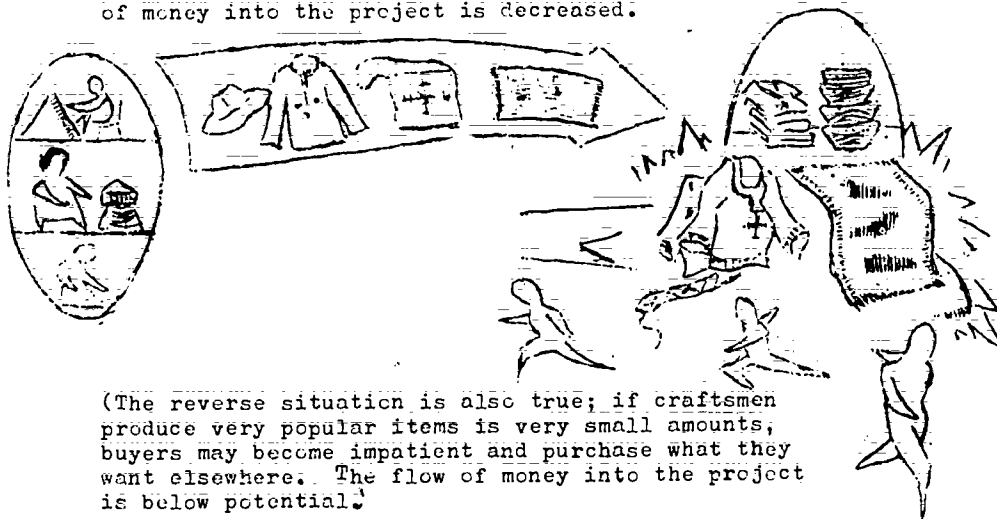
- A. Establishing a Base
- B. Time Study
- C. Adjustments
- D. Final Results



PRCDUCTION

When a craftsman makes something, his materials and his salary cost money. The money is not returned to the project until the item is bought by a customer.

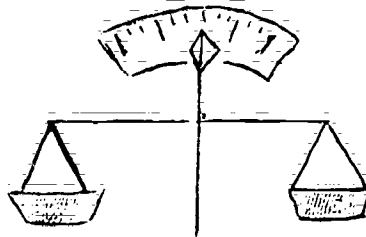
If craftsmen produce items which are not bought, the money spent by the project to produce the item is not replaced. The items accumulate in storage and the flow of money into the project is decreased.



(The reverse situation is also true; if craftsmen produce very popular items in very small amounts, buyers may become impatient and purchase what they want elsewhere. The flow of money into the project is below potential.)

I. Regulating Production

VRP tries to regulate production by coordinating production level with the level of sales. The aim is to have the project produce the same amount of goods as can be sold.



A. Necessary Information

In order to achieve a balance of what amount of goods can be produced and sold, certain information is needed:

1. Stock - How many of each item are now waiting to be purchased?
2. Sales - How many of each item has been bought over the past six months and what is the average number of items sold each month?

Example: Sales of adult sweaters, Aug.-Jan.

Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
21	25	58	62	83	21

Total number of sweaters sold - 270  
 Average number of sweaters sold per month - 47

3. Production Rates- How many of each item  
month / How many can be made?

Example: It takes about 38 working hours or one working week to make one adult-large sweater. There are 12 persons making this size of sweater. One knitter makes one sweater per week; 12 knitters make 12 sweaters per week; there are 48 sweaters made per month.

## 8. Drawing Conclusions

### Example 1.

A project produces adult size sweaters and other knitted items. There are no finished sweaters in stock right now. The project sells an average of 45 sweaters per month. The 12 adult sweater knitters produce about 48 sweaters per month.

Though the knitters produce slightly more per month than are sold (average), the project manager decides that the production rate and the sales rate are close enough and the production rate does not need adjustment.

In the future, if the demand for sweaters increases, more knitters will be trained to make this kind of sweater. If sales decrease and sweaters begin to accumulate in the stock room, the manager will look at the sales record for that month of the previous year to see if the decrease is seasonal (i.e. temporary). If the 'slump' seems long-term, some knitters will be taught other work.

### Example 2.

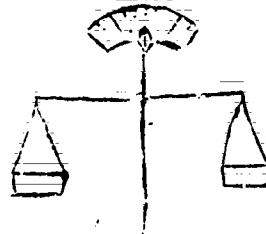
A project produces many handicraft items. The manager is studying the basket department. He finds that there are 57 baskets in storage waiting to be sold. The project sells an average of 12 baskets per month, which means there are enough baskets already made to meet the demand for the next five months. There are 9 basket weavers who produce a total of 36 baskets per month, three times the amount that can be sold.

The project must either sell more baskets or make fewer baskets, or both.

It is decided that the three best basket makers will learn to make another kind of basket, a style which the project manager feels will be easier to sell. The other six basket makers will be trained to do new work in other departments.

### Example 3.

A project produces clay dishes. There are no dishes in stock and the project sells all that are made. Many people come to buy dishes, but there are never enough. There are 6 dish-makers who produce 18 dishes per week. The project decides to train four more dish-makers. Ten dish-makers can produce 30 dishes per week, bringing the supply of dishes closer to the demand for them and increasing the amount of money coming into the project.



Production Schedule

The result of balancing production and sales is the production schedule. A production schedule is based on a certain length of time and tells workers and departments how much work (how many items) must be completed within that time period.

1. Types of Production Schedules

- a. Stable - This kind of schedule is the same for each time period. The VRF knitters make certain items each week. Each knitter does the same kind and amount of work each week.
- b. Rotating - Items made in this kind of schedule alternate with new time periods. The VRF rug weavers spend one month on one set of designs and sizes and the following month on an alternate set of rugs. Then they return to the work instructions of the first month.
- c. Fluctuating - This production schedule type is used for isolated orders of either standardized or non-standardized items. The fabric weaver makes a bolt of cloth of a certain size and color design. His next piece of work and the next will each be different. He produces non-standardized items on a fluctuating schedule. If a demand for a particular kind of cloth develops, cloth production will be standardized and he may work with a stable or rotating schedule. The fluctuating schedule is used primarily for experimentation.
- d. Combination - Sometimes two or more kinds of schedule are combined. The VRF sewing room has a basic rotating schedule in which weeks 1 and 3 are alike and weeks 2 and 4 are alike. There is also a fluctuating schedule for isolated orders of standardized items. After work on the regular schedule has been completed, the cutter begins working from the order board where isolated orders not included in the regular work are indicated.

<u>KIND OF SCHEDULE</u>	<u>VRF DEPARTMENTS</u>
Stable.....	Spinning, Knitting
Rotating.....	Carpet weaving, Drawing, Embroidery
Fluctuating.....	Basket weaving, Cloth weaving
Combination.....	Sewing room

2. Types of Departments

Some VRF departments are independent; that is they take raw materials from the supply and return finished products to the stock of completed work ready for sale.

The carpet weavers take wool from stock and return rugs to stock. The fabric weaver takes thread from stock and returns cloth to stock.

Most VRF departments work interdependently with one or more other departments. It is necessary to coordinate their production not only with sales but with the production rates of related departments.

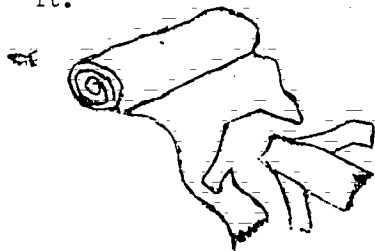
Spinners take raw cotton from supply and return yarn to the knitter. Knitters use the yarn to make sweaters which are prepared for sale.

The sewing room takes cloth from supply and sends sewn items to stock or on to drawing. The drawers apply designs and send the items to the embroiderers reproduce the color patterns in thread on the drawn items and return them to the sewing room for hand-sewing.

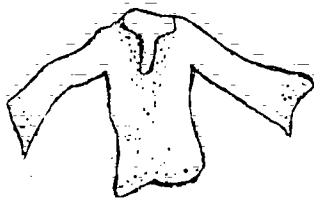


## THE STORY OF A TUNIC

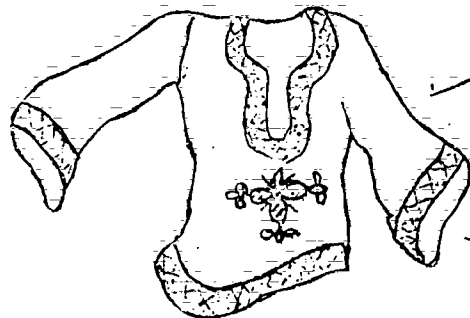
An example of a product which is the result of work in several related departments is the project's 'trademark' item, an embroidered shirt called a tunic. Here are the processes which go into making it.



1. In the sewing room, the bulked cloth is cut according to the pattern size listed on the production schedule. A machine sewer sews the garment together.

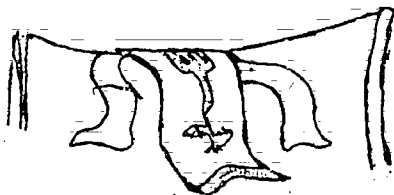


2. The partially sewn tunic is sent to the drawing department to have a specific design drawn or printed on it.



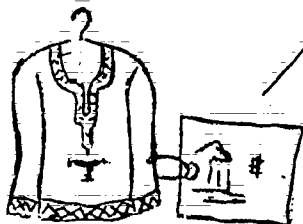
3. The marked tunic is issued to an embroiderer along with the color pattern indicated on the production schedule and the necessary thread.

4. The embroidered tunic is returned to the sewing room for handsewing of the facings.



5. The completed tunic is washed and ironed.

6. The finished tunic has a price tag attached to it and is sent to one of the sales outlets.



All knitted and most cloth items are washed (and some are ironed) in preparation for sale. Each step of production (for every VRP item) involves some kind of record keeping.

#### D. Purchasing, Supply and Distribution

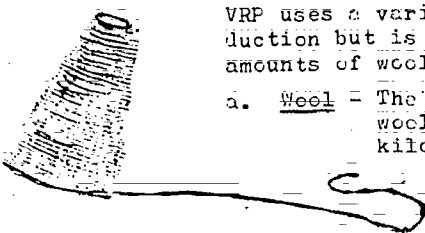


In order for the project as a whole to meet its production schedules and fill orders, the raw materials and supplies needed by the various departments must be ready for them.

##### 1. Considerations in Buying Supplies

- a. Cost - The lower the cost of supplies, the lower the cost of producing items for sale. The VRF has found it cheaper to buy supplies in bulk (paying wholesale prices). The ability to purchase supplies in bulk is one advantage the project is able to offer its craftsmen.
- b. Availability - If a project builds its production of materials which are readily available, production can be more regular. VRF has found locally produced goods both cheaper and more consistently available than imported goods.
- c. Amount - How much of various supply items a project has at any one time depends of several variables; capital needed to purchase in bulk, storage space, production level, sales rates by season, etc.

##### 2. VRF Supplies

VRF uses a variety of materials and supplies in its production but is most dependent upon locally available amounts of wool, cotton, buloko and thread.

- a. Wool - The wool is purchased in bulk from a local wool factory. VRF uses an average of 47 kilos of wool per month.  

- b. Raw Cotton - The raw cotton is purchased locally in bulk. VRF uses about a hundred kilos of raw cotton per month. The seeds are removed and sold to a vegetable oil factory. Of the one hundred kilos of raw cotton, only about 40 kilos of thread can be spun.  

- c. Embroidery Thread - VRF has had to use imported thread to insure color-fastness of products. This thread is twice as expensive as local thread and not always available in desired color combinations. The problem has been temporarily solved by the sharing of an order at discount prices. As the quality of local thread improves more items will be embroidered with it. VRF uses about 240 spools of thread per month.  

- d. Buloko - The buloko is purchased from a sister agency. About 400 meters per month is used.
- e. Miscellaneous - Other supplies such as acrylic yarn sewing thread, needles, buttons, snaps, lining cloth etc. are purchased in the Addis Ababa Merkato (market) and from other local distributors.

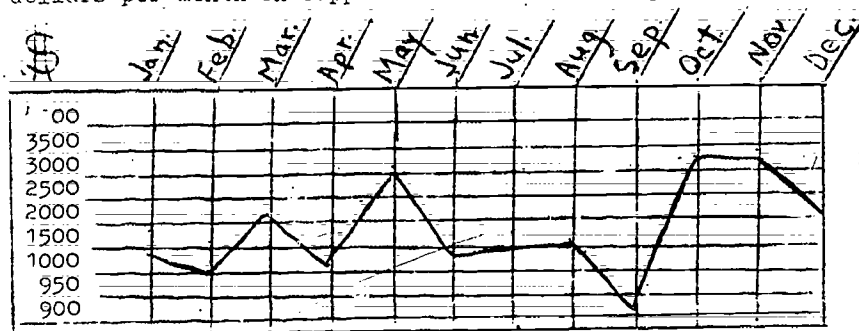
3. Purchasing Necessary Supplies

In order to keep craftsmen supplied with the things they need, certain information is necessary.

- a. Stock - How much of any given supply item is currently in the supply room?
- b. Production - How much of each supply item is needed to allow the project to meet its production schedules for a given time period? (eg. a month)
- c. Cost - Where can these materials be purchased at the lowest cost? If the materials are not available through the usual source, where else can they be obtained?

4. VRP Purchasing Rates

The purchase of supplies is effected by availability, cost and production rates. Sometimes supplies are bought by the week or month; other times several months supply is purchased at once. During 1975 VRP spent an average of 2100 dollars per month on supplies.



5. Distribution of Materials

After necessary supplies are purchased they are stored for distribution to the craftsmen.

The amount of work handed out is determined by the production schedule for each department and the amount of supplies and materials needed for each craftsman to do his job.

When materials are handed out the amount is subtracted from the supply inventory or from the records of a particular department. Workers sign for the work they have taken.

## II. ACCEPTING COMPLETED WORK

When a craftsman completes his work on a finished or partially finished product, the item is checked for quality and recorded as received. Some items are weighed to determine the amount of material that has been used. If the craftsman has been given more than he has used, the remainder is used to begin his next task.

Every two weeks the work recorded for each person is computed into a total salary and a salary ticket is issued. On pay day the ticket is exchanged for cash.

### A. Quality Control

The main concern in accepting work is quality. If the project produces items of poor quality, the items are not bought and the money invested in the making of the item (cost of materials and salaries) is not replaced into the general project operating fund.

Maintaining high quality standards is the key factor in successful sales for VRP. Therefore quality control is a primary concern in the production unit.

#### 1. Supervision and Quality Control

Ideally the quality of work is controlled by the craftsman himself. In reality, external supervision is often needed to maintain consistent quality standards.

a. Familiarity - If a worker is making an item with which he is familiar, it is easier for him to exercise quality control on his own work. If a former fisherman is trained to weave fish-nets, he knows that the entire net must be uniformly strong and the hole must be small enough to retain fish of a certain size, allowing water to escape.

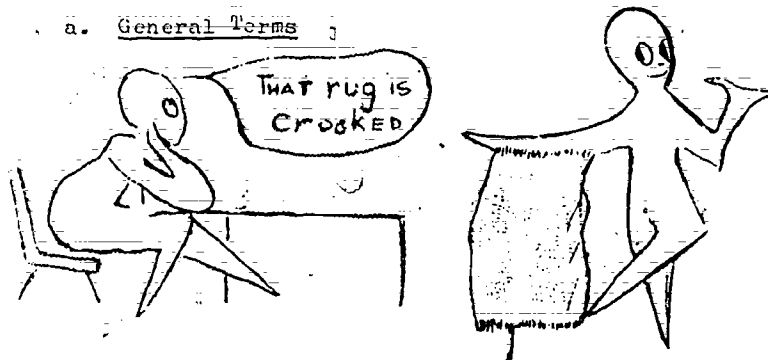
To a worker who is making an item that he does not have experience in using, errors in production will not be obvious. For example, if the same man is asked to apply the same skill to making net room dividers he must adjust his work to meet new quality standards. The end product must hang evenly from the hanging rod to the floor.

b. Interdependency - If an item on which a craftsman works goes on to another department for another process, the craftsman must understand something of the next worker's task in order to perform his own properly.

Machine sewers working on pillows and toys need to realize that the seams must withstand not only normal stress but the added pressure of stuffing.

## 2. Communicating Quality Standards to Craftsmen

### a. General Terms



### b. Specific Terms



## 3. VRE Quality Standards

VRE has found specific quality standards accompanied by salary deductions for incorrect work to be the most effective way of maintaining quality control.

For incorrect work which cannot be redone the craftsman receives a lower salary. A rug which is not symmetrical cannot be reweven. Because an imperfect rug must be sold at a lower price, the weaver of the imperfect rug receives a lower salary.

For work which can be redone, a part of the salary is withheld until the work is corrected and returned. A sweater which does not meet the established measurements for a particular size is unraveled and re-knitted. When the corrected sweater is returned the knitter is paid the remainder of his salary.

VRE found that it was necessary to standardize the amount to be deducted for each kind of mistake, post the information on bi-lingual charts for each department and explain the information to the assembled workers. This method of informing craftsmen clarifies management expectations for work quality standards and eliminate inconsistencies in deductions (avoiding accusations of favoritism).

4. Alternatives

A variation of this piecework-payment system is that of having craftsmen buy materials from the project and sell completed work back to the project for the price of their original expense plus a salary.

This system places more responsibility on the worker and decreases the amount of direct supervision needed.

VRP has not adopted this system because it would double the amount of financial bookkeeping that would need to be done, and because it is difficult to implement such a system in a project with so many interdependent departments.

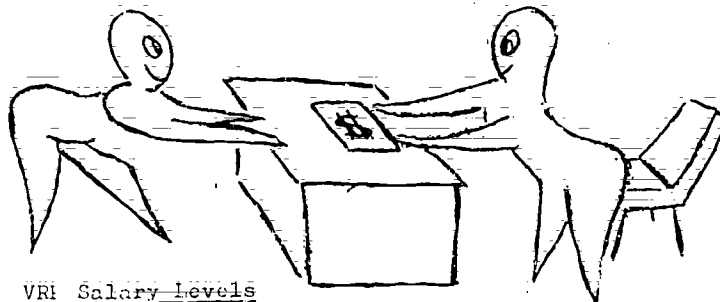
B. Salaries

1. Types of Salaries

- a. Standard - A worker receives a regular salary, the same amount every pay period.
- b. Piecework - A worker receives a specific amount of money for each piece of work he turns in. The more work he turns in, the higher his total salary.
- c. Combination - A worker receives a regular salary, the same amount for each pay period, and specified amounts of money for piecework he does in addition to his regular work.

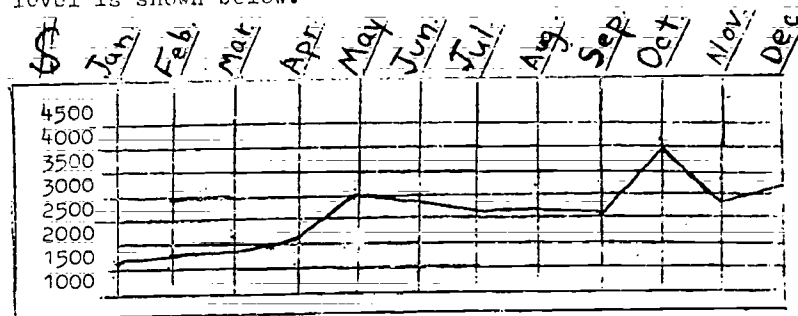
VRP Participants receiving standard salaries.....	5
VRP Participants receiving piecework salaries.....	81
VRP Participants receiving combination salaries.....	4

90



2. VRP Salary Levels

When salaries are paid on a piecework system, the amount of total money paid out each month fluctuates with production rates. Production rates are determined by the level of sales. Money paid out in salaries in 1974 averaged 2600 dollars per month. The fluctuation in level is shown below.



3. Adjusting Piecework Salaries

Early in 1975 volunteers began meeting frequently to discuss adjusting piecework salaries so that they would be uniform throughout the various departments and would be coordinated with revised production schedules. These are the steps they took.

- a. Research - Examination of average monthly salaries for the previous six months to determine imbalance.
- b. Establishing a Base - Computing the amount of money craftsmen can earn per hour to receive a living wage without threatening the project with bankruptcy.
- c. Time Study - Measuring the amount of time it takes to each task for which piecework salaries are paid.
- d. Coordinating Results - Making a new salary scale based on the information collected in the previous steps and the current production schedules (revised).

III. HOW TO DETERMINE PIECEWORK SALARIES

For those interested in the details which accompany the above steps, they are given here:

A. Establishing a Base

1. Determine the approximate number of working hours per day, week and month for one person.

Example: 8 working hours per day.  
 5½ working days per week.  
 44 working hours per week.  
 4 working weeks per month.  
 176 working hours per month.

2. Determine the base salary:

If each VRF worker receives \$30.00 per month, the goal of paying a living wage is achieved. Monthly salaries will average 2700 dollars per month, slightly higher than the 1974 monthly average. (Some workers in management positions receive more than this amount and some part-time workers receive less.)

3. Divide the number of working hours per month into the amount of money per month which constitutes the base salary. The result is the amount of money per hour on which the final salary will be based.

$$\frac{\$30.00 \text{ per month}}{176 \text{ working hours per month}} = 17 \text{ cents per hour}$$

15 cents per hour.....	\$ 26.40 per mo.
16 cents per hour.....	28.16 per mo.
17 cents per hour.....	29.92 per mo.
18 cents per hour.....	31.68 per mo.
19 cents per hour.....	33.44 per mo.
20 cents per hour.....	35.20 per mo.
22 cents per hour.....	38.72 per mo.
25 cents per hour.....	44.00 per mo.

B. Time Study

1. Ask workmen to work where they can be timed doing each task. Determine the average length of time needed to accomplish each task.

Example: Four craftsmen embroider designs on pillows.

It takes craftsman no. 1 three hours and thirty minutes.  
It takes craftsman no. 2 four hours and fifteen minutes.  
It takes craftsman no. 3 four hours and thirty minutes.  
It takes craftsman no. 4 three hours and forty-five minutes.

It takes four craftsmen a total of 16 hours to embroider designs on four pillow covers.

It takes one craftsman an average of four hours to do this task.

2. Assemble this information for each task in the project which is done by workers receiving a piecework salary.

C. Adjustments

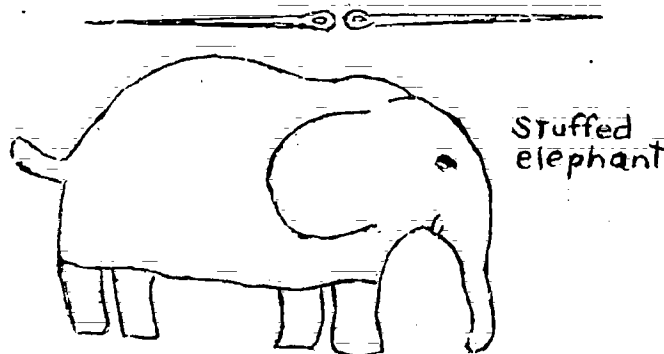
1. Multiply the number of hours it takes to do each piece of work by the base per hour salary.

Pillow cover - 4 hours x 17 cents per hour = 68 cents

2. Examine the production schedule to see if each worker can make a living wage at his present work and the base per hour salary. (i.e. If a man's only job is to embroider pillow covers, and the production schedule calls for only 15 pillow covers to be embroidered per month, he cannot make a living wage based on a salary of 68 cents per pillow cover.)

D. Final Results

Determine the final salary scale for each piecework task. (Sometimes the base salary per hour is raised or lowered depending on the production schedule. Amounts are usually rounded off to the nearest five cents to avoid having to use pennies for cash payment of salaries.)





SECTION SIX - RECORD KEEPING

- I. VRP Record Keeping
  - A. Records Pertaining to People
  - B. Records Pertaining to Things
  - C. Records Pertaining to Production Level
  - D. Records Pertaining to Costing
  - E. Records Pertaining to Pricing
  
- II. Considerations in Producing a New Product
  - A. Marketability
  - B. Production Cost
  - C. Production Procedure
  
- III. Overall Considerations



## RECORD KEEPING

Records of information are kept to help answer questions and make decisions. The aim of record keeping is to organize information in a way that it can be most easily used.

In the absence of experience or professional advice, a general rule for record keeping is "Write Everything Down" and eventually a system of organization develops which suits the individual situations.

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### I. VRP Record Keeping

The descriptions of records below represent systems VRP has found necessary and useful. In the past, all records were kept in English. Now VPP is implementing a bi-lingual record keeping system.

#### A. Records Pertaining to People

1. Personnel File Cards - Information about each worker is kept on file cards, organized by department (see p.13).
2. Skills Charts - These charts indicate for quick reference how many persons can do each task. It tells whether workers can teach the skill, are independent workers or are students. The information is useful in adjusting production.

	Emb.	Knit	Crochet
Worker A	I		
Worker B	T		
Worker C	I	S	
Worker D		I	S

I=independent worker, T=teacher, S=student

Worker A is an independent worker in the embroidery department.

Worker B is an independent embroiderer who is good enough at his work to teach others.

Worker C is an independent embroiderer who is learning to knit.

VRP has found it advantageous to have workers trained to work in more than one department and to be able to perform more than one task in a department. That way, if demand for a certain item drops and production of it is cut back, workers can be transferred to another department without an interruption in their salaries.

B. Records Pertaining to Things (Inventory)

Inventory records tell how much of everything there is in the project and its location.

1. Types of Inventory Records

- Inventory of consumable supplies.
- Inventory of tools, furniture and other property.
- Inventory of partially finished and finished products.

2. Sample Inventory Card

(The number in the top right hand corner is a code number. Each item for which there is an inventory card has a number. The cards are arranged in numerical order. An index of code numbers and item names accompanies each set of cards.)

Description <u>hat</u>		Location <u>Storeroom</u>		
Size/Type <u>Large</u>		Number <u>9</u>		
Date	Issued to/from	Received	Issued	Balance
June 1	from sew	16	-	16
June 3	to shop	-	10	6
June 5	to shop	-	6	0
June 7	from sew	20	-	20

a. Interpreting the Card

- On June 1, 16 large hats were received from the sewing room and put into the storeroom.
- On June 3, 10 large hats were sent to the shop, leaving 6 in the storeroom.
- On June 5, 6 more hats were sent to the shop, leaving a balance of none.
- On June 7, 20 hats were received from the sewing room making a balance of 20 hats in stock.

b. Determining the Amount of Money Tied Up

- If hats cost 4 dollars each to produce, the 20 hats in the storeroom represent an investment of \$80.00.
- If hats sell for 5 dollars each, the 20 hats represent \$100.00 in potential cash returns when they are sold.

Two columns can be included at the right of the inventory card called 'Total Investment' and 'Potential Returns'

Records Pertaining to Production Level

1. Records of Sales - How much / how many of each item was sold during each month of the past year and what is the monthly average? (Taken from sales receipts.)
2. Record of Prepared Stock - How many of each item is waiting to be bought? (Taken from storeroom inventory.)
3. Record of Available Supplies - How much of each material is now in stock? (Taken from inventory of consummable supplies.)
4. Skills-Charts - How many persons can do each task?
5. Time Study - What is the average length of time it takes to do each task and produce each item?
6. Production in Detail - Exactly what amount of consummable materials go into making each item?
7. Work Distribution and Collection Records (dated)
8. Salary Payment Records (dated)

D. Records Pertaining to Costing

1. Purchasing Costs - What is the purchasing cost of each material used in the project by unit and in bulk?
2. Itemized Production Costs - What is the cost of consummable materials which go into the making of each item produced.

Example - Here is the cost of consummable materials which go into making an adult tunic. (The figures have been rounded for easier illustration.)

Buloko - 2 1/2 meters	x	\$3.00 per meter	=	\$7.50
Lining cloth - 1/9 meter	x	.90 per meter	=	.10
Machine and hand sewing thread - 1/3 spool	x	.30 per spool	=	.10
Embroidery thread - 3/4 balls	x	1.00 per ball	=	3.50
Total cost of consummable materials:.....				\$ 11.20
				= \$ 11.20

3. Salary Scale - Set piecework wage amounts based on time study. (Figures adjusted for illustration)

Example - For making a tunic these salaries are paid:

Cutter.....	\$ .50
Machine Sewer.....	1.00
Embroiderer.....	10.75
Hand Sewer.....	.75

Total Labor Cost..... \$13.00

4. Production Cost Per Item - This is found by adding the cost of materials and the cost of labor for each item.

Adult Tunic  
 Cost of materials.....\$11.20  
 Cost of labor..... 13.00  
 Production Cost.....\$24.20

5. Overhead and Operating Expenses - All the expenses of the project which are not specifically craft materials and piecework salaries must be paid for too.

Non-piecework salaries.  
 Rent and utility bills.  
 Maintenance on equipment.  
 Transport expenses.  
 Laundry expenses.  
 Paper, pencils, paper clips etc.

Overhead expenses cannot be computed for each item produced in the same way as production cost. It is necessary to compute overhead as a whole and figure it as a percentage of the basic production cost.

Example - (Figures rounded for illustration)

Expenses for materials.....\$2000 per mo.  
 Expenses for labor..... 3000 per mo.  
 Basic Production costs.....\$5000 per mo.

Overhead expenses.....\$ 500 per mo.

The overhead expenses of 500 dollars are 10% of the basic production costs per month.

E. Records Pertaining to Pricing

1. Production Cost - Cost of materials and labor for each item.
2. Overhead Cost in Percent

Example.....Adult Tunic

Production Cost.....\$24.20  
 Overhead (10%)..... 2.40  
 Total Production Cost.....\$26.60

The price of the tunic must return a minimum of \$26.60 to the project. The tunic sells for \$35.00, leaving a profit margin of \$8.40 or about 24%

II. Considerations in Evaluating a New Product

- A. Marketability - Who will buy it? For what price?
- B. Production Cost - How much will it cost the project to produce the item? How much of a profit margin can be made?
- C. Production Steps - How will this item be made?

(The profit margin on some items allows the project to produce other items at cost and to cover the cost of training.)


### III. Overall Considerations

The real reason for keeping records is to allow management personnel to answer two important questions about projects.

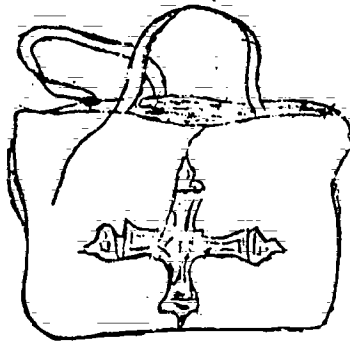
Is the project operating at a financial loss or a financial gain? (Does the money coming into the project fall below or exceed the money coming in?)

Is the project meeting, exceeding or falling below demand for the items made?

The chart below shows how finances and production operate together. In the blocks are suggestions for stabilizing imbalance between the two factors of money and production.

	Operating at a Financial Gain	Operating at a Financial Loss
Meeting Demand		<ol style="list-style-type: none"> <li>1. Decrease production costs.</li> <li>2. Increase prices.</li> <li>3. Try making and selling a new item to increase sales.</li> </ol>
Exceeding Demand	Reduce production level to meet demand.	<ol style="list-style-type: none"> <li>1. Reduce production level.</li> <li>2. Reduce production costs.</li> <li>3. Try making and selling a new item to increase sales.</li> </ol>
Falling Below Demand	Increase production level to meet demand.	<ol style="list-style-type: none"> <li>1. Increase production level.</li> <li>2. Increase prices.</li> <li>3. Reduce production costs.</li> </ol>

Example - A project is operating at a financial gain but falling below demand. They can sell more items. The suggestion is that they increase production to meet demand, thus bringing more money into the project. (Lower left side box.)



Embroidered Purse

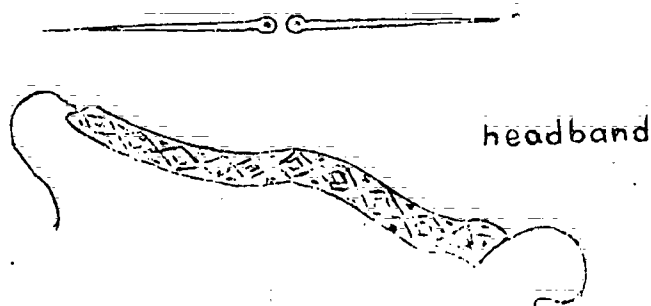
CONCLUDING REMARKS

If you give a man a fish, you give him food  
for a day.

If you teach him how to fish, he can eat  
everyday.

- Oriental Proverb-

- I. Training is useful only if the trainee can be assured of regular employment and a cash income upon completion of training.  
What a person is trained to do should be determined through market research.
  - A. Any training course should emphasize the abilities of the participants (rather than their disabilities).
  - B. Any course of study should also encourage workers towards responsible work habits.
- II. The level of sales determines the level of production.
  - A. The maintaining of strict quality control standards is essential for maintaining sales.
  - B. Those individuals responsible for production must understand the relationship between quality and sales and between sales and project survival.
- III. The circulation of money and goods is maintained by the application of business management skills. Thorough record keeping provides information on which management decisions can be based.
- IV. A clear idea of the desired direction of the project is necessary for establishing project priorities.



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SUGGESTED RESOURCE PUBLICATIONS

The book list which follows contains publications which may be useful and interesting to persons involved in small handicraft businesses. They can be ordered from the publishers.

BUSINESS

Accounting for Everyday Profit.....A practical guide to business management systems for persons not trained in accounting.  
J.K. Lassar  
1970  
Simon and Shuster  
1 West 39th Street  
New York, N.Y.  
10018

Small Business Administration.....This organization prints many publications on business management topics. Request a catalog.  
Washington D.C.  
20416

CRAFT IDEAS - GENERAL

American Home Crafts .....An illustrated craft book with a wide range of ideas presented in steps.  
Dowd Publishing Company  
1973  
641 Lexington Avenue  
New York, N.Y.

Basketry ..... A general guide to basketry including care of grasses and design ideas.  
F.J. Christopher  
1952  
Dever Publications  
18 Varick Street  
New York, N.Y.

Handbook of Stitches ..... This book contains illustrated steps for embroidering many kinds of stitches. It also suggests design ideas.  
Grete Peterson and Else Svennas  
1970  
Van Nostrand Reinhold Company  
450 West 33rd Street  
New York, N.Y.  
10001

The Complete Book of Progressive Knitting ..... This book presents the fundamentals of knitting in well illustrated steps as well as many knitting patterns.  
Ida Riley Duncan  
1966  
Liveright Publishing Co.  
386 Park Avenue South  
New York, N.Y.  
10016



DYEING

Natural Plant Dyeing ..... Useful instructions for natural dyeing and plant selection.  
Brooklyn Botanical Garden  
1973 - Published Quarterly  
2601 51st Street  
Brooklyn, Maryland  
U.S.A.

Vegetable Dyeing ..... This book contains many useful plant-color charts and complete instructions for preparing and using vegetable dyes.  
Sana Busch  
1971  
Watson Gupta Publishers  
165 West 46th Street  
New York, N.Y.

WEAVING

Byways in Hand Weaving ..... This book covers all aspects of hand weaving. It also contains a section on the use of handicraft activities in occupational therapy.  
Mary Metz Stwater  
MacMillan Publishers  
1954  
New York, N.Y.

Needle Weaving ..... This book describes history, techniques and new ideas for weaving without a formal loom.  
Ester Warner Dondel  
1971  
Countryside Press Division  
of Farm Journal Inc.  
Philadelphia, Pennsylvania

The Techniques of Rug Weaving ..... This book is well illustrated and contains detailed information which applies to other types of weaving as well.  
Peter Collingwood  
1968  
Watson Gupta Publishers  
165 West 46th Street  
New York, N.Y.

To Build or Buy a Loom ..... The excellent diagrams and clear explanations will save the reader time and money in selecting a loom.  
Harriet Tibbals  
1968  
Craft and Hobby  
Box 626  
Pacific Grove, California  
U.S.A.

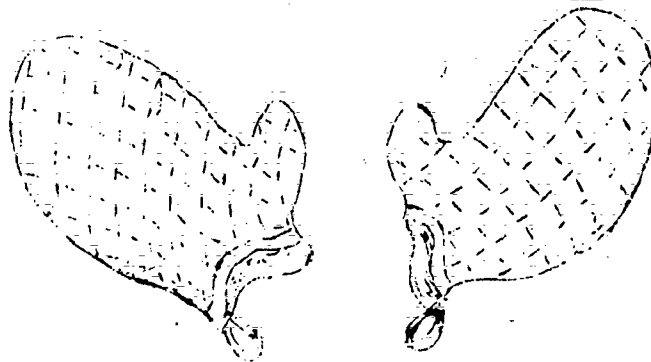
Weaving Techniques and Projects ..... This well illustrated book contains information on several kinds of looms and describes simple projects.  
Editors of Sunset Books - 1974  
Lane Books  
Menlo Park, California  
U.S.A.

SEWING

McCall's How To Fit Book ..... This book contains useful  
1973 information on fabric types,  
McCall's Pattern Company advice for pattern selection,  
230 Park Avenue and instructions for adjusting  
New York, N.Y. patterns to fit men, women and  
children.

McCall's Step By Step  
Sewing Book ..... This book contains complete  
McCall Corporation sewing information regarding  
1969 fabric, patterns, tools and  
230 Park Avenue tailoring.  
New York, N.Y.

The Illustrated Hassle Free  
Make Your Own Clothes Book..... A useful book for sewing  
Sharon Rosenberg and Joan Wiener without patterns.  
1971  
Straight Arrow World Publishing Co.  
110 East 59th Street  
New York, N.Y.



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