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IMPROVEMENT OF GARMENT DESIGNING
AND MANUFACTURING ACTIVITY

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REPUBLIC OF VANUATU

Technical report: Garment manufacture*

Prepared for the Government of Vanuatu
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work of Donald Chisholm
Garment manufacturing expert

Backstopping officer: A. Eršneva, Agro-based Industries Branch

United Nations Industrial Development Organization
Vienna

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I INTRODUCTION

This report covers the second and final phase of the Garment Training Course that was held at Tagabe, Port Vila, Vanuatu. The course finished on Friday 18 December 1987 and the nine students completing the full course have been awarded a course certificate by the Vanuatu Government. The students' certificates have all been graded according to their ability and competence on all of the subjects covered.

II SUMMARY OF FINDINGS

The Garment Training Course started with ten participants and finished with nine due to an illness. The students attended the course regularly and they were all anxious to learn as much as possible.

I have selected two mature students with sufficient knowledge and who have the capability to teach and instruct people on future training courses. Other students from different islands are to teach their people when they return home. The remainder of the students with the help of Government loans intend to start or improve their own small businesses.

As the Garment Training Course has progressed, many local people have become aware of its existence and consequently there has been a flood of enquiries and a list of people wishing to attend the next course. Most local small business people have expressed their desire to learn more about pattern design and drafting techniques. These people realise the need to improve and produce more prototype patterns from illustrations and drawings and to develop patterns to their own designs.

III GARMENT INDUSTRY TRAINING COURSE PHASE TWO DESIGN LAY-PLANNING AND CLOTH CUTTING

This further extension of pattern drafting was covered by all the students and produced in 1/5" scale and full scale.

1. Dress Construction

Using the bodice and skirt blocks that were drafted in the first half of the course.

- a. Basic one piece dress block
- b. Basic two piece dress block
- c. Waist shaping for dress blocks (suppression)

2. Collar Construction

Under the four basic groups

- a. Flat collars
- b. Standing collars
- c. Collars cut in one with the garment
- d. Collars with revers

3. Various dress sleeves

Using basic block sleeves that were drafted in the first half of the course

- a. Flared sleeves
- b. Bishop sleeve
- c. Puff sleeve
- d. Gathered head sleeve and gathered into cuff
- d. Cap sleeve

4. Trouser Construction

How to measure both the male and female figure to find the body rise measurement

- a. Gents basic trouser blocks
- b. How to draft trouser - waistbands - fly - back and front pocket variations
- c. Sport shorts with variation of style features
- d. Conversion of gents block patterns to fit ladies
- e. Trouser grading

5. All students have used both block and master patterns to develop a variety of styles for the following garments

- a. Skirts
- b. Shirts and blouses
- c. Trousers
- d. Shorts and sports styles
- e. Dresses
- f. Waistcoats

6. All of the pattern designing, cutting and manipulation has been kept very simple and drafted to the level of each student's capabilities.

Master diagram drawings of all block patterns taught have been drafted in colour and attached to the walls of the garment training centre. These diagrams are for the benefit of future students as visual information and for the two instructors' guidance.

7. The Principles of Lay-Planning for mass production

The students have all participated in a one week's full instruction on lay-making and lay-planning using all the equipment at the Centre. They have been taught basic maintenance and how to change the cutting knife and drive belts. Both instructors have been given a manufacturer's manual for future reference. The students worked in groups and each group was given a set of patterns to reduce and cut out into miniature $\frac{1}{5}$ " scale models.

Each group planned their most economical marker layout on the planning board over different fabric widths. Master copies were then made of their final and best lay-plan and each student given copies for future reference. The Garment Training Centre has now miniature models for four garment pattern styles.

As the students have had no practical experience or knowledge of bulk production it was therefore difficult for them to comprehend the advantages and cost savings that can be made by using this system without actually seeing a factory cutting room in operation.

8. Fabric Laying-up machine

A large wooden table has been made for the laying up machine and it is now assembled and working satisfactorily. The students have all watched a working demonstration of this equipment and have had all the working parts of the equipment explained to them.

The students are now capable of setting up the machine and operating it to fit any length of marker.

9. Circular Cutting Knife

The students have all used the circular cutting knife under strict supervision. They have been shown basic maintenance as per the manufacturer's instructions and are capable of changing the cutting blade and the sharpening stones. The emphasis on safety was stressed continually with no doubt left as to the consequences of carelessness. The students proved to be careful and competent whilst cutting out garments under supervision.

10. Garment Hanging Ticket Design and Hanger Appeal

The students were taught to design hanging garment tickets and the importance placed on the size of the tickets, its colour, its place on the garment and the information it should contain. All of the students thoroughly enjoyed this subject and many interesting designs, logos and trade names were concocted and many students developed a flair and were constantly trying to improve their ticket designs.

Four display rails were borrowed from local shops and the students encouraged to lay out the 70 finished garments and display them to their best advantage for customer appeal.

IV

GARMENT INDUSTRY TRAINING COURSE

PHASE TWO - SEWING MACHINIST TRAINING AND GARMENT PRODUCTION

Each student has cut out from fabric difference types of pockets and machined them to a satisfactory standard. The students have their own samples of each pocket style with full making instructions in Bislama.

1. Five basic pocket types and their distinctive appearance
 - a. Welt pocket
 - b. Jetted pocket
 - c. Flap pocket
 - d. Patch pockets
 - e. Diffent seam pockets
2. Further skills taught with students making their own samples after demonstration
 - a. Gents trouser fly
 - b. Gents bagged out shirt yoke
 - c. Collar making
 - d. Shirt cuff making
 - e. T-shirt front openings
3. All of the students have made finished garments from their block and master patterns for each of the following garments
 - a. Skirts
 - b. Shirts and blouses
 - c. Long trousers
 - d. Short sports trousers
 - e. Ladies dresses
 - f. Boxer sport-shorts (elasticated waist)
 - g. Waistcoats
4. There was a total of 70 individually made garments and the students were given the opportunity to purchase them at the end of the course at the material cost price.

5. Costing (Material and trimmings)

The students have been taught how to work out basic costs and the class have collectively costed the 70 garments made at the Garment Training Centre. All the finished garments were ticketed and priced and sold to the students at the end of the course.

6. Labour Costs

An attempt to arrive at basic labour cost for the garments made using local average wage rates and giving time values to each job was difficult for the students to understand and appeared irrelevant to them. Time is not an important factor to them at this early stage and is not compatible with their inherent easy going life style. Once they have developed their skills, speed and experience labour costs will eventually receive more consideration.

7. Quality Control

This was very difficult to develop and instill into some students as they have been oblivious to any recognised standards of make, pressing and finishing. Their only objective being that the garment sewed together and covered the body. This thinking has been rectified and reasonable standards of quality introduced at all levels of making.

Pressing-off finished garments was most difficult as many students had simply no idea how to approach this task and invariably made the garment look worse. They have now been taught the correct method to press-off the different garments made.

V RECOMMENDATIONS

1. I recommend that a suitable Ni-Vanuatu be selected and sent on a sewing mechanics course. The machines at the Garment Training Centre require constant repair and maintenance because of the inexperienced students constantly being trained on them. Once the clothing expert leaves Vanuatu it will only be a matter of time before all the machines require attention.
2. I recommend that a follow up period of time be considered for a garment technologist to observe, assist and to guide the two training instructors in applying correct training method and to help and advise students who are now developing their own small businesses. The expert should be capable of instructing and developing these people to a higher level of competence and skill in all clothing techniques.
3. An overseas mail order company should be contacted with a view to supply Vanuatu with fabrics, thread, zips, trimmings etc. at competitive and realistic prices. At present the prices, availability and selection of goods at present on offer in Port Vila is very poor and limited.

4. I would suggest that evening classes be held at the Garment Training Centre as there appears to be a demand from people who are at work during the day.
5. I recommend that the Garment Training Centre start making small production orders. The following orders have already been offered
 - a. Make T-Shirts for local business
 - b. Make curtains for local hotel
 - c. Make garments for small industries shop.
6. The clothing quota for manufactured garments to Australia should be considered as a source of work that could be made at the Garment Training Centre, the back-up expert acting as the production manager whilst teaching a Ni-Vanuatu replacement.

VI EFFECT OF RECOMMENDATIONS

1. By training their own sewing machine mechanic the machinery at the Garment Training Centre will be kept in good working order and repair costs kept to a minimum. This would also allow the two instructors to concentrate on teaching.
2. Cheaper fabrics and trimmings would enable the Training Centre to make their garments at competitive prices. Garments would then be priced attractively for tourists and local people to purchase.
3. By introducing bulk orders many students trained at the Centre could be employed as production operators helping to defray the costs at the Centre.

The effect of these recommendations if implemented would help the Garment Training Centre with running and maintenance costs and if managed properly, the Centre could become self-supporting and eventually profitable.

VII CONCLUSION

If financial assistance or some form of self generation is not implemented quickly, the Garment Training Centre will close. This would be a sad loss to the country and the people. I therefore suggest that all sources of income be investigated and considered with a final commitment being made by all concerned to have the Garment Training Centre self-supporting in the near future.