

### **III METHODOLOGY**

In accordance with the objectives and hypotheses framed, an appropriate methodology was designed and adopted for the study entitled “**An Action Research on the Impact of Entrepreneurial Training Programmes for Selected Women in Thiruvananthapuram District of Kerala**”.

This investigation adopted an experimental design which is a before and after design also termed as pre-test or post- test design. Kumar (2019) defined it as the most appropriate design for measuring the impact of a programme or intervention which can be described as two sets of cross sectional data collection points on the same population to understand the change in variables after a stipulated time period. As per Krishnaswami and Ranganatham (2016), An action research is a type of evaluation study, a concurrent evaluation study of an action programme launched for solving a problem or for improving an existing situation.

This study comprised of four phases enlisted below:

#### **Phase I: Pre-Training Phase**

- A. Selection of locale of the study
- B. Selection of sample
- C. Selection of methods and framing of tools
- D. Conduct of socio- economic survey cum training needs assessment

#### **Phase II: Training Implementation Phase**

- A. Selection of trainees
- B. Selection of locale of training
- C. Selection of training personnel
- D. Preparation of the training content and modules
- E. Selection of training methods
- F. Knowledge, Attitude and Practice (KAP) test and extent of adoption of entrepreneurship (pre-test)
- G. Conduct of the entrepreneurial training programmes
- H. Feedback analysis

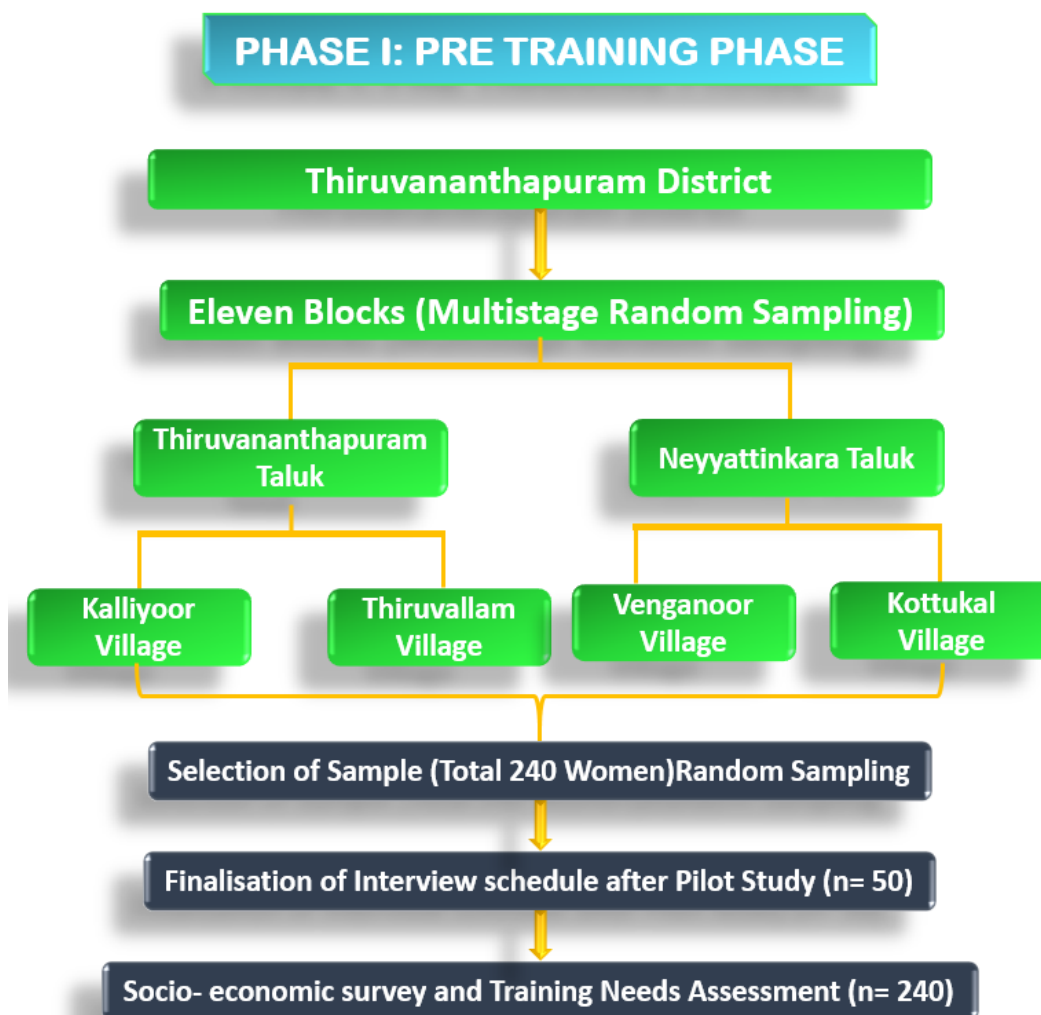
#### **Phase III: Post Training Phase**

- A. Selection of follow up methods and conduct of follow up activities
- B. Selection of problem analysis techniques
- C. Initiatives for linkages

#### Phase IV: Impact Assessment Phase

- A. Knowledge, Attitude and Practice (KAP) test and extent of adoption of entrepreneurship (post- test)
- B. Assessment of product making skills
- C. Collection of data on details regarding establishment of enterprises
- D. SWOC analysis
- E. Variables of the study
- F. Analysis and interpretation of data

Research design of this study is portrayed below:



## PHASE II: TRAINING IMPLEMENTATION PHASE

Selection of Trainees (n= 130 Women) based on Training Needs Assessment

Selection of Locale of Training

Selection of Training Personnel

Selection of Training Contents and Modules

Selection of Training Methods and Materials

Finalisation of KAP Tool and Data Collection (n= 130)

Training Implementation (Based on Training Needs Assessment)

BATCH 1  
Convenience  
Food (n= 35)

BATCH 2  
Wealth out of  
Waste (n= 34)

BATCH 3  
Eco- friendly  
Products (n= 31)

BATCH 4  
Beauty Products  
(n= 30)

Day 1  
Module 1

Entrepreneurship  
Development Training

Basic facts of  
entrepreneurship

Motivational Facts

Business and  
operations facts

Brand building and  
marketing facts

Day 2  
Module II

Hands on Training

Training on  
Convenience food

Training on Wealth  
out of waste

Training on Eco-  
friendly products

Training on Beauty  
products

Day 3  
Module III

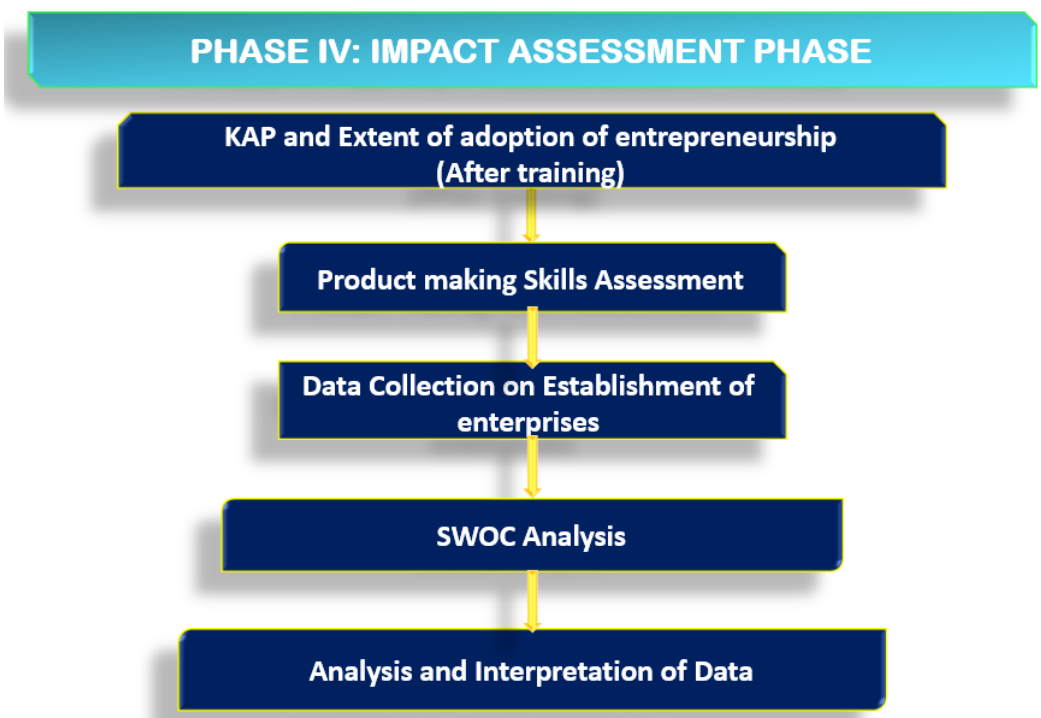
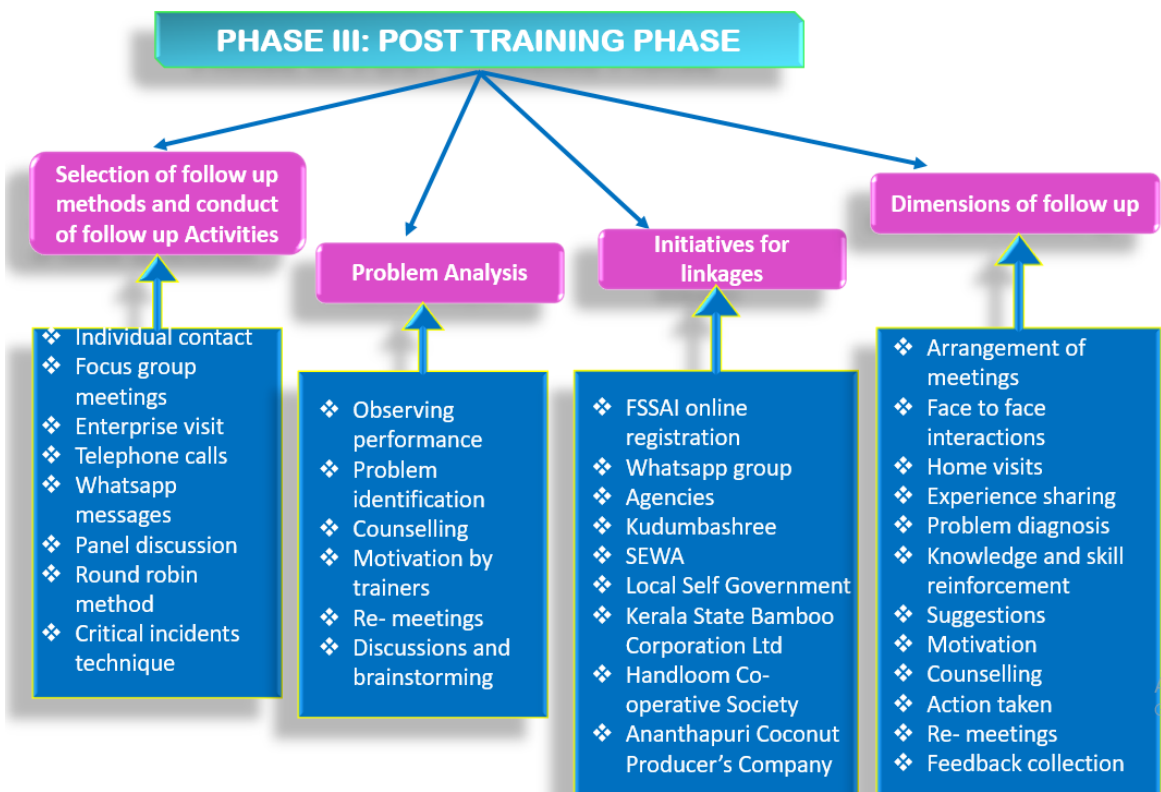
Supportive Services

Labelling and  
Packaging

Agencies and  
Schemes supporting  
entrepreneurs  
Interaction with  
successful  
entrepreneurs

Exposure Visits

Feedback Analysis (n= 130)



**Figure 17: Research Design**

## Phase I: Pre-training Phase

Pre- training phase comprised of the preparatory stages for the organising and implementation of entrepreneurial training programmes. This phase enclose the following stages:

- A. Selection of locale of the study
- B. Selection of sample
- C. Selection of methods and framing of tools
- D. Conduct of socio-economic survey cum training needs assessment

### A. Selection of locale of the study

The district Thiruvananthapuram is the southern- most district, the headquarters as well as the capital of Kerala. With an area of 2192 Km<sup>2</sup>, situated on the west coast of India, surrounded by Thirunelveli district of Tamil Nadu in the East, Kanya district of Tamil Nadu in the South, the Arabian sea in the west and Kollam district of Kerala in the North, is between North Latitudes 8<sup>0</sup>17' and 8<sup>0</sup>54' and East longitudes 76<sup>0</sup>41' and 77<sup>0</sup>17'.

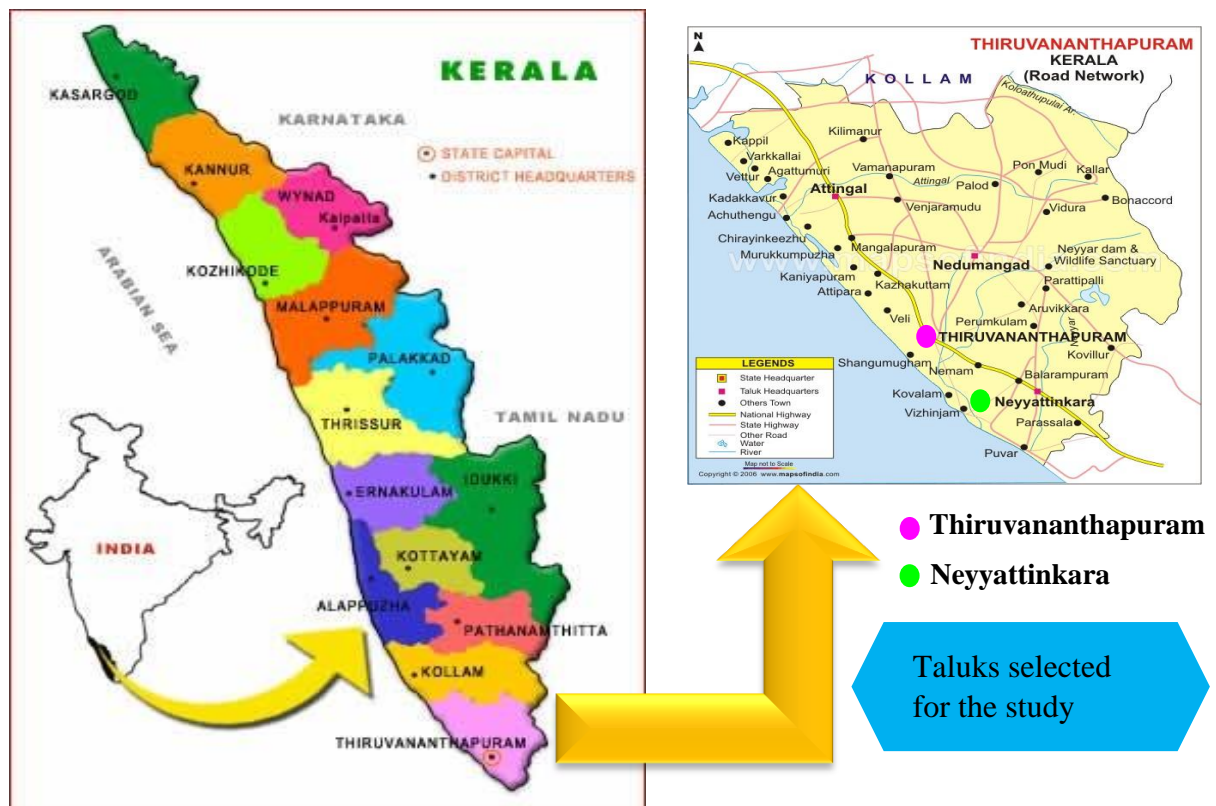


Figure 18: Locale of the Study

The district of Thiruvananthapuram was formed on November 1, 1956 as a part of linguistic reorganisation of the Indian States. The sea coast is 78 Km long and blessed with rivers, lakes and backwaters.

**Table VII**  
**Thiruvananthapuram District at a Glance**

Details	Thiruvananthapuram District
Total area	2192 Sq Km
Total population	3301427
Female Population	1719749
Male Population	1581678
Literacy rate	92.66%
Taluks	11
Villages	125
Urban bodies	5

**Source:** Kerala State Land Use Board, Thiruvananthapuram, 2013.

Thiruvananthapuram district has been selected as the study area due to the prevalence of large number of unemployed women population and lower work force participation rate when compared with other districts of the State. Along with this, the district is the digital hub of Kerala and offers more opportunities for the development of women entrepreneurship. Being the capital and headquarters, major offices of Industries sector are functioning here. One of the added advantage is that Kudumbashree NHGs (29,861) are more in number in the district which can facilitate the growth of women entrepreneurs. These factors made the investigator to select Thiruvananthapuram district as the study area.

### **B. Selection of sample**

A sample is defined as any number of persons selected to represent the population according to some rule or plan. Thus, sample is a smaller representation of the population (Singh, 2016). This investigation adopted multistage random sampling method. When sampling is done in stages from bigger to smaller units within the units selected at previous stage, it is called multistage sampling (Imam, 2015). In the first stage of the sampling, among fourteen districts of Kerala, Thiruvananthapuram has been selected and in the second stage, among eleven taluks of the district, two taluks such as Neyyattinkara Taluk and Thiruvananthapuram Taluk were randomly selected. In the stage three of the sampling, out of 124 villages, two villages from each taluk were selected randomly, constituting a total of four villages from two taluks. Hence, the study has been formulated to conduct in the four villages like Kalliyoor and Thiruvallam from Thiruvananthapuram Taluk; Kottukal and Venganoor from Neyyattinkara Taluk.

From each village, 60 women were selected randomly who are willing to give consent to participate in the research activities and are above 18 years of age. Thus, the total sample became 240 women from Thiruvananthapuram district of Kerala. The researcher justifies the

fact that, as the study is an action research, for a qualitative and effective output, the samples were limited to 240 women.

### **C. Selection of methods and framing of tools**

Data are the facts and figures collected for records or any statistical investigation (Adams et al., 2012). The present study gathered data from both primary and secondary sources. Accurate data collection is essential to maintain the integrity of research. Primary data is collected by the researcher as first-hand information through various types of data collection methods using appropriate tools (Joshi, 2016). Primary data have been collected through interview, observation, focus groups and discussions with the respondents, various officials, non-officials and other people's representatives. Interview is a system in which both the investigator as well as the informants discuss the problem under research, the former usually taking the initiative with the object of extracting information from the latter (Sharma, 2011). Primary data serve the basis for arriving at analysis and inferences. Adequate information relevant for the study has been collected through an interview schedule during the first phase of the research, which is termed as Training Needs Assessment Tool. First part of the tool comprised of information pertaining to the socio-economic and demographic details of the respondents like age, religion, marital status, educational qualification, family type, head of the family, monthly household income, occupation, respondent's monthly income, place of residence, land holdings, saving pattern and self-help group membership details. The second part enumerated training needs assessment which gathered information on items like entrepreneurial background information, entrepreneurial competencies, training needs, preferences on training components, training package formulation, expectations and their awareness on entrepreneurial support services. After conducting pilot study among a sample of 50 respondents, based on the suggestions and recommendations from eminent subject experts in the field of Extension Education and Statistics, the tool was finalised.

Information vital for the study have also been collected from secondary sources. Secondary data are collected from already been created sources for review (Paneerselvam, 2014). It comprise of textbooks, print and online journal articles, websites, publications and reports of Government and Non-Government organisations, doctoral dissertations, newspapers, encyclopaedia volumes and so on.

### **D. Conduct of socio-economic survey cum training needs assessment**

During the first phase of the research, training needs assessment was carried out to find out the women who are interested and in need to participate in the entrepreneurial training programmes framed for the research work. Training Needs Assessment Tool was used in this

phase for the baseline survey of the pre-action situation. The investigator created rapport with the samples and collected required data through interview and observations. The survey helped to gather information on the respondents who are interested to participate in the entrepreneurial training programmes and their various training needs. The investigator also contacted the leaders of each village through Kudumbashree Neighbourhood Groups, other self- help groups and Local Self Government. These officials and non- officials also provided valuable information on the attitude, behaviour pattern, geographical features and resources availability in each region.



**Plate 2: Interview with the Respondents**

## **Phase II: Training Implementation Phase**

The entrepreneurial training programmes were framed out after the training needs assessment. The implementation stage involved various sub stages that are explained below.

- A. Selection of trainees
- B. Selection of locale of training
- C. Selection of training personnel
- D. Preparation of the training content and modules
- E. Selection of training methods

- F. KAP (Knowledge, Attitude and Practice) test and extent of adoption of entrepreneurship (pre- test)
- G. Conduct of the entrepreneurial training programmes
- H. Feedback analysis

#### **A. Selection of trainees**

Based on the training needs assessment, from 240 respondents, a subsample of 130 women were identified as the trainees for the entrepreneurial training programmes. They were again subcategorised into four groups having 35 trainees in convenience food products group, 34 trainees in wealth out of waste products group, 31 trainees in eco- friendly products group and 30 trainees in beauty products group by considering their needs, interest, willingness, geographical situations and availability of resources.

#### **B. Selection of locale of training**

Based on the data from training needs assessment, locale of training programmes were organised in places nearby the trainees. House terraces, courtyard and community halls were conveniently used as the training locale.

#### **C. Selection of training personnel**

In order to stimulate the entrepreneurial intentions among the trainees, the role of trainers cannot be neglected. Trainers were identified from various institutions in respective areas of entrepreneurship. They encompass experts from educational institutions, banks, NGOs, Government projects and successful enterprises. Knowledge, experience and skills of trainers in the areas of entrepreneurship were better utilized in the training sessions.

#### **D. Preparation of the training content and modules**

The training contents and modules were framed based on the training needs assessment. Three days training programme was arranged for each group consisting of induction programme on entrepreneurship development, hands on training experiences and supportive services. Training package is portrayed in Plate 3.

## TRAINING PACKAGE

### ENTREPRENEURSHIP DEVELOPMENT TRAINING (Induction Programme)

#### Module 1

##### Basic facts of entrepreneurship

- Concept of entrepreneurship
- Micro entrepreneurship
- SWOC analysis.

##### Motivational facts

- Achievement motivation
- Resource management
- Elements of motivation

##### Business and operations facts

- Business idea creation
- Business planning and Selling
- Business Management
- Finance and accounting
- Legal Procedures/ business policies

##### Brand building and marketing facts

- Brand building
- Customer engagement
- Various marketing techniques

#### Module 2

### HANDS ON TRAINING

##### Training on Convenience Food

**BATCH I**  
35 trainees

1. Coconut water soft drink
2. Instant coconut masala mix
3. Virgla coconut oil
4. Coconut theeyal mix
5. Coconut laddu




##### Training on Wealth out of waste

**BATCH II**  
34 trainees

1. Paper bag
2. Cloth pouch
3. Craft items from plastic bottles
4. Home decors from popsicle sticks
5. Coconut shell soap dish




##### Training on Eco- friendly products

**BATCH III**  
31 trainees

1. Packing basket
2. Reed Flower vase
3. Lamp shade
4. Muram
5. Reed container




##### Training on Beauty Products

**BATCH IV**  
30 trainees

1. Handmade soap
2. Herbal hibiscus shampoo
3. Papaya facial cream
4. Henna mix
5. Beetroot lip balm




#### Module 3

### SUPPORTIVE SERVICES

##### Labelling and packaging

- Packaging
- handling methods
- weighing
- quality check
- logo creation



##### Agencies and schemes supporting entrepreneurs

- Regional, local and national agencies
- Schemes for women entrepreneurs
- Banker sessions



##### Interaction with successful entrepreneur

- Talk by experienced successful entrepreneurs



##### Exposure Visits

- Related enterprise units



**Plate 3: Training Package**

**Table VIII****Schedule of the Entrepreneurial Training Programmes**

<b>Name of the programme</b>	<b>Date and Time</b>	<b>Venue</b>	<b>Training method</b>	<b>Faculty</b>
Induction Programme for Group 1	13/05/2019 10.00 am to 3.00 pm	Kottukal	Lecture, Group Discussion, sensitivity training and Brainstorming	Mrs Lekshmi R P Assistant Professor Department of Home Science, NSS College for Women, Trivandrum
Skill training for Group 1 <b>(CONVENIENCE FOOD)</b>	14/05/2019 10.00 am to 3.00 pm	Kottukal	Demonstration and Hands on Training	Mr Krishnan Nair M Chairman, Ananthapuri Coconut Producer's Company, Aralumoodu, Trivandrum
Support services for Group 1	15/05/2019 10.00 am to 3.00 pm	Kottukal	Lecture, Case study, video presentation and Field visit	Mrs Mini R Marketing Officer Canara Bank, Kottukal Branch Trivandrum
Induction Programme for Group 2	16/05/2019 10.00 am to 3.00 pm	Balaramapuram	Lecture, Group Discussion and Brainstorming	Mrs Roselet Programme Co-ordinator Marketing Division SEWA NGO, Trivandrum
Skill training for Group 2 <b>(HERBAL BEAUTY PRODUCTS)</b>	17/05/2019 10.00 am to 3.00 pm	Balaramapuram	Demonstration and Hands on Training	Mrs Chithra Beautician, Soorya Herbal Beauty Parlour, Kallayam, Trivandrum
Support services for Group 2	18/05/2019 10.00 am to 3.00 pm	Balaramapuram	Lecture, Case study, role play and Field visit	Mrs Geetha Programme Co-ordinator Training Division, SEWA NGO, Trivandrum
Induction Programme for Group 3	19/05/2019 10.00 am to 3.00 pm	Thirupuram	Lecture, Group Discussion and Brainstorming	Mrs Lekshmi R P Assistant Professor Department of Home Science, NSS College for Women, Trivandrum
Skill training for Group 3 <b>(WEALTH OUT OF WASTE)</b>	20/05/2019 10.00 am to 3.00 pm	Thirupuram	Demonstration and Hands on Training	Mrs Dhanya P Sales Retail Facilitator CAPW Institute, Trivandrum Mrs Leena and Mrs Sheeba Master Crafts, SEWA NGO, Trivandrum
Support services for Group 3	21/05/2019 10.00 am to 3.00 pm	Thirupuram	Lecture, Case study and Field visit	Mrs Roselet Programme Co-ordinator Marketing Division SEWA NGO, Trivandrum
Induction Programme for Group 4	22/05/2019 10.00 am to 3.00 pm	Kalliyoor	Lecture, Group Discussion, Brainstorming	Mrs Kumari Community Counsellor Kudumbashree Regional Office, Trivandrum
Skill training for Group 4 <b>(ECO- FRIENDLY PRODUCTS)</b>	23/05/2019 10.00 am to 3.00 pm	Kalliyoor	Demonstration, simple literature and Hands on Training	Mrs Saritha Master Craft, SEWA NGO, Trivandrum
Support services for Group 4	24/05/2019 10.00 am to 3.00 pm	Kalliyoor	Lecture, Case study and Field visit	Mrs Geetha Programme Co-ordinator Training Division, SEWA NGO, Trivandrum

### E. Selection of training methods

Interactive lectures, group discussions, brain storming sessions, lecture cum demonstrations, hands on experiences, video clips and so on were the training methods utilized by the trainers based on the nature of each session. These methods were organised by taking into consideration of the preferences of trainees and suggestions from trainers. Day one of the training dealt with induction programme on entrepreneurship which consisted of topics like basic facts of entrepreneurship, motivational facts, business and operations facts and brand building and marketing facts. Day two focused on skill training in respective enterprises selected by the trainees. The trainers demonstrated product making procedures and the trainees followed by doing it by themselves. The raw materials were arranged in the training venue itself. Day three was allotted for field visits to respective enterprises and knowledge and skill enhancement in supportive services like labelling, packaging and incentives available for entrepreneurship. Booklets were supplied to the trainees in Malayalam for future reference which detail on the procedures of product making, related enterprises and organisations promoting particular product

(<https://drive.google.com/drive/folders/16Ods99F8nqsLQghnmdmSNdY3eYBLdGM6?usp=sharing>.)



**Plate 4: Simple Literature Distributed to the Trainees**

## **F. Knowledge, Attitude and Practice (KAP) test and extent of adoption of entrepreneurship (pre-test)**

In this phase of research work, Knowledge, attitude and practice of the trainees along with their extent of adoption of entrepreneurship before involving in the training programmes were assessed through a questionnaire. Pilot study has been conducted among 15 trainees in order to check the feasibility of the tool. Recommendations and suggestions from subject experts were an added benefit to finalise the tool. Knowledge, attitude and practice scales were prepared to measure the knowledge level, attitude and practice level of the respondents with regard to entrepreneurship. It consisted of positive and negative statements. Each scale having 15 statements were administered to the respondents and responses were marked on a three point scale as agree, undecided and disagree in the Knowledge scale with scores 2, 1, 0 respectively for positive statements and vice versa for negative statements, a five point scale as strongly disagree, agree, neutral, disagree and strongly disagree in the Attitude scale with scores of 4, 3, 2, 1 respectively for positive statements and vice versa for negative statements, three point scale as yes, unaware and no in the Practice scale with scores of 2, 1, 0 respectively. The extent of adoption of entrepreneurship was assessed through a set of statements. Four statements with three options each were asked to the trainees and the responses were scored accordingly. The scoring was 3, 2, 1 for options 1, 2 and 3 respectively.

## **G. Conduct of the entrepreneurial training programme**

Entrepreneurial training programmes were organised in four batches, each batch having three days of training altogether twelve days of training programme for all batches. Batch 1 had 35 participants for learning convenience food products like virgin coconut oil, coconut masala mix, theyal mix, coconut laddu and coconut water soft drink. Batch 2 had 34 participants for learning wealth out of waste products like paper bag, coconut shell soap dish, cloth pouch, craft items from plastic bottle and home decors from popsicle sticks. Batch 3 had 31 participants for learning eco- friendly products made of reed like reed container, flower vase, lamp shade, packing basket and muram (winnow). Batch 4 had 30 participants for learning beauty products like handmade soap, henna mix, papaya facial cream, herbal hibiscus shampoo and beetroot lip balm. On day one of training each batch undergone induction training, day two was for skill training and day three was for support services.



**Plate 5: Entrepreneurial Training to Batch 1 - Convenience Food Products**



**Plate 6: Entrepreneurial Training Programme for Batch 2 - Wealth out of Waste Products**



**Plate 7: Entrepreneurial Training Programme for Batch 3 - Eco-friendly Products**



**Plate 8: Entrepreneurial Training Programme for Batch 4 - Beauty Products**

## H. Feedback analysis

In order to evaluate the effectiveness and the extent to which the trainees are satisfied with the implemented training programme, feedback analysis was carried out using a questionnaire. The questionnaire consist of three parts in which the first part details on the feedback of the entrepreneurial training programmes. It has 17 statements having five point scale as strongly agree, agree, neutral, disagree and strongly disagree with scores 5, 4, 3, 2 and 1 respectively. The second part of the tool indicate perception of the trainees on the usefulness of the entrepreneurship training programmes at five point scale as very high, high, medium, low and very low with scores 5, 4, 3, 2 and 1 respectively. The third part dealt elements like suggestions of the trainees and sources of information received by them regarding the conduct and schedule of the training programmes.



**Plate 9: Collection of Feedback from Trainees**

### Phase III: Post Training Phase

- A. Selection of follow up methods and conduct of follow up activities
- B. Selection of problem analysis techniques
- C. Initiatives for linkages

### **A. Selection of follow up methods and conduct of follow up activities**

Follow up methods were adopted for tracking the progress of trainees in terms of adopting entrepreneurship after attending the training programmes. Once in two months, the researcher conducted follow up by adopting various methods in combination which suit the set of trainees. Frequent telephonic conversations and Whatsapp group updates helped to keep in touch with them. Focus group meetings were organised in the nearby places where everyone can meet together for discussing the factors that motivate them and the factors that demotivate them. The trainees who were not able to attend these meetings and those who were not willing to attend meetings were contacted individually by visiting them in their houses. Researcher also tracked records of the trainees, who had started their own enterprises.

### **B. Selection of problem analysis techniques**

During focus group meetings, problem analysis techniques were adopted for rectifying the problems encountered by the trainees during their journey to entrepreneurship. Observing the performance of the trainees, identification of the problems, rectification of the same through counselling were the techniques to be noted down during follow up. Subject experts also revisited the trainees in order to concrete the entrepreneurial ideas and to give motivation for those who are in the track. Re-meetings were arranged for discussions and brain storming and the cycle of processes continued for a period of ten months post training.

### **C. Initiatives for linkages**

The researcher had taken initiatives through linkages to support the trainees to come up with entrepreneurship ventures. FSSAI online registration portal was introduced to the trainees for registering their food product enterprises, whatsapp group was created and updated with information to assist them in needful time, linkages with various agencies like Kudumbashree, Self Help Groups, Ananthapuri Coconut Producer's Company, Local Self Government, SEWA (NGO), local textile units, supermarkets, stationary shops, Kerala State Bamboo Corporation Ltd, Event management units, beauty parlours and department stores were created through subject experts for training, financial and marketing supports.



**Plate 10: Follow up Meetings**

### **Phase IV: Impact Assessment Phase**

- A. Knowledge, Attitude and Practice (KAP) test and extent of adoption of entrepreneurship (post- test)
- B. Assessment of product making skills
- C. Collection of data on details regarding establishment of enterprises
- D. SWOC analysis
- E. Variables of the study
- F. Analysis and interpretation of data

#### **A. Knowledge, Attitude and Practice (KAP) test and extent of adoption of entrepreneurship (post- test)**

In this phase of research work, knowledge, attitude and practice of the trainees along with their extent of adoption of entrepreneurship after involving in the training programmes were assessed through KAP tool which was administered in phase two of the research. The intention of this assessment was to find out the positive or negative impact created by the training programme on the trainees by statistically assessing the change in knowledge, attitude, practice and extent of adoption of entrepreneurship by the trainees.

#### **B. Assessment of product making skills**

Product making skills acquired by the trainees were assessed after the training programmes. A score of one mark is given to each step in making of finished products under each category of enterprises. The scoring pattern adopted is illustrated in Table IX.

**Table IX****Scoring Pattern to Assess the Product Making Skills Developed by the Selected Trainees**

<b>Nature of enterprise</b>	<b>Product</b>	<b>Number of Steps</b>	<b>Maximum Score</b>	<b>Minimum Score</b>
Convenience food	Virgin coconut oil	6	6	0
	Coconut laddu	6	6	0
	Instant coconut masala mix	5	5	0
	Theeyal mix	6	6	0
	Coconut water soft drink	5	5	0
<b>Total score</b>			<b>28</b>	
Wealth out of waste	Paper bag	4	4	0
	Coconut shell soap dish	5	5	0
	Cloth pouch	6	6	0
	Craft items from plastic bottles	6	6	0
	Home décors from popsicle sticks	6	6	0
<b>Total score</b>			<b>27</b>	
Eco- friendly products	Reed container	7	7	0
	Reed flower vase	7	7	0
	Lamp shade	7	7	0
	Packing basket	7	7	0
	Muram	7	7	0
<b>Total score</b>			<b>35</b>	
Beauty products	Handmade soap	5	5	0
	Herbal hibiscus shampoo	5	5	0
	Papaya facial cream	5	5	0
	Henna mix	5	5	0
	Beetroot lip balm	5	5	0
<b>Total score</b>			<b>25</b>	

**C. Collection of data on details regarding establishment of enterprises**

An interview schedule was prepared to track the record of trainees who had started their own enterprise, planning to start enterprises and deviated from entrepreneurship. The tool consisted of questions on nature of enterprises established by the trainees, infrastructural and allied details, economic impact of the enterprises, constraints faced by the trainees, future plans, details on those who are planning for establishment of enterprises, reasons for not establishing enterprise and impact of training programmes on different aspects like family, finance and society.



**Plate 11: Participation of Trainees in Exhibitions**



**Plate 12: Trainees in Exhibition Stalls**



Paper bag unit

Paper bag unit

Entrepreneurs in the paper bag unit

Coconut products unit

Entrepreneurs in the coconut products unit

Entrepreneur in the paper bag unit

**Plate 13: Establishment of Enterprises by the Trainees**



Eco- friendly products

Coconut chutney powder

Coconut masala mix

Theeyal mix

Coconut masala mix

Theeyal mix

Kripa Self Help Group

Amma Self Help Group

**Plate 14: Products and Self Help Groups of the Trainees**

**D. SWOC analysis**

Strength, weakness, opportunities and challenges of the trainees after attending the training programmes were asked and recorded by the researcher.

## E. Variables of the study

Variables are facts that can take on quantitative values. There are independent and dependent variables. Independent variables are the cause and dependent variables are the effect. Since the research is designed in various phases, methodology also framed phase wise. Hence, independent variables and dependent variables also have been presented in respective phases.

**Table IXa**  
**Variables and their empirical measurements**

Sl. no.	Variable	Measurement
<b>A</b>	<b>Phase I</b>	
	<b>Pre-Training Phase</b>	
I	Independent variables	
i	Socio economic variables	
1	Age	Chronological age completed in years
2	Religion	Direct questioning
3	Marital status	Direct questioning
4	Place of residence	Direct questioning
5	Family type	Direct questioning
6	Educational qualification	Direct questioning
7	Occupation	Direct questioning
8	Land holdings	Direct questioning
9	Income	Direct questioning
10	Saving pattern,	Direct questioning
11	Self Help Group membership	Direct questioning
ii	Entrepreneurial background	
1	Previous experience	Direct questioning
2	Involvement of family in entrepreneurship	Direct questioning
3	Entrepreneurial competencies	Schedule developed
4	Training needs assessment - Training	Schedule developed

	preferences on nature of enterprise, month, time duration, days, venue, trainer, training package, training method and expectations.	
II	Dependent variables	
1	Interest to participate in entrepreneurial training programmes	Direct questioning
<b>B</b>	<b>Phase II Training Implementation Phase</b>	
I	Independent variables	
1	Entrepreneurial training	Organised
II	Dependent variables	
1	Entrepreneurial knowledge related statements	Schedule developed
2	Entrepreneurial attitude related statements	Scale developed
3	Entrepreneurial practice related statements	Schedule developed
4	Feedback related statements	Schedule developed
5	Extent of adoption of entrepreneurship	Schedule developed
<b>C</b>	<b>Phase III Post Training Phase</b>	
I	Independent variable	
1	Entrepreneurial training	Organised
II	Dependent variable	
1	Initiation of enterprise	Direct questioning
<b>D</b>	<b>Phase IV Impact Assessment Phase</b>	
I	Independent variable	
1	Entrepreneurial training programme	Organised
II	Dependent variables	
1	Familial aspects like fulfilment of family needs, decision making, time utilization,	Questionnaire

	self-esteem, personal development, family support and work life balance.	
2	Financial aspects like approachability to bank, financial independence, income and savings, additional income source and capability to manage financial problems.	Questionnaire
3	Social aspects like social gatherings, contacts, SHG membership, social status and understanding of social issues.	Questionnaire

In the first phase of research, the independent variables are socio- economic variables and entrepreneurial background variables. Socio- economic variables are age, religion, marital status, place of residence, family type, educational qualification, occupation, land holdings, income, saving pattern and Self Help Group membership. Entrepreneurial background related variables are previous experience in entrepreneurship, involvement of family in entrepreneurship, entrepreneurial competencies and training needs whereas the dependent variable is the interest to participate in entrepreneurial training programmes.

In the second phase of research, independent variables encompass entrepreneurial training while dependent variables are statements with respect to the measurement of entrepreneurial knowledge, attitude, practice, feedback and extent of adoption of entrepreneurship.

In the third phase of research, entrepreneurial training is the independent variable and initiation of enterprise is the dependent variable. Initiation of enterprise is measured by asking questions related to enterprise building which is detailed in Annexure VII.

In the fourth phase of research, independent variable is the entrepreneurial training and dependent variables are aspects with respect to family, finance and society. Familial aspects like fulfilment of family needs, decision making, time utilization, self-esteem, personal development, family support. Financial aspects like approachability to bank, financial independence, income and savings, additional income source and capability to manage financial problems. Social aspects like social gatherings, contacts, SHG membership, social status and understanding of social issues.

## **F. Analysis and interpretation of data**

Analysis and interpretation of data have distinct roles in research. Analysis covers the assembling, cleaning and examining of the data, whereas interpretation is making sense of the data generated and analysed (Polonsky and Waller, 2011). Collected data were coded, tabulated and statistically analysed using descriptive and analytical statistical methods in SPSS software. Analysed data provided required source for the inferences and conclusions drawn. Apart from frequency, percentage analysis and graphical representations, following statistical tools are used in the study.

- **Paired sample t- test**

A paired sample t- test is used to compare two population means in which observations in one sample can be paired with observations in other sample.

$$t = \frac{\bar{d}}{s_d/\sqrt{n}}$$

In the present study, paired sample t- test have been used to find out the significant differences in changes before and after the training programme in terms of knowledge, attitude and practice of the respondents.

- **Factor Analysis**

Factor analysis is a multivariate statistical analysis whose objective is to define the underlying structure in the data matrix. Broadly speaking, it addressed the problem of analysing the structure of interrelationship (correlation) among a large number of dimension and the explanation of each variable are determined, so that the two primary uses for factor analysis, namely summarization and data reduction can be achieved. In summarizing the data, factor analysis derives underlying dimensions that, when interpreted and understood, describe the data in a much small number of concepts than the original individual variables.

Factor analysis was used in the present study to assess the entrepreneurial competencies of the respondents, evaluation of the training in terms of feedback and usefulness of the entrepreneurial training programmes.

- **Logit Model**

The logistic regression is one that specifies a functional relationship between a basically dichotomous dependent variable and categorical independent variables. In fact it is a method of multivariate analysis of the multiple regression model designed to deal with the

situation when one has the measurement of presence or absence, occurrence or non-occurrence of some factors. Logistic regression is concerned with modeling the odds of dependent variable and the parameters for logistic are most easily interpreted as they are expressed as odd ratios. The basic form of logistic function is:

$$P = \frac{1}{1+e^{-Z}}$$

When numerator and denominator of the right side of the above equation are multiplied by  $e^Z$ , the logistic function can be expressed in the following manner:

$$P = \frac{\exp(z)}{1 + \exp(z)}$$

Where  $z$  is the predictor variable and  $e$  is the base of natural logarithm, equal to 2.7182. If  $z$  is a linear function of a set of predictor variables then:

$$Z = b_0 + b_1 X_1 + b_2 X_2 + \dots + b_k X_k$$

This expression is substituted in the formula for logistic function. Thus, the function becomes

$$P = \frac{1}{1 + e^{-(\beta_0 + \beta_1 \xi_1 + \beta_2 \xi_2 + \dots + \beta_k \xi_k)}}$$

Odds ratio is the ratio of the probability of the event occurring to the probability of the event not occurring and is denoted as:

$$\ln(P_i / (1 - P_i)) = b_0 + b_1 X_1 + b_2 X_2 + \dots + b_k X_k + e$$

Where,

$P_i$ =Probability of the event

occurring;  $b_0$ =Constant term;

$X_1$  to  $X_k$ =Independent variables;

$b_1$  to  $b_k$ =Unknown regression coefficients associated with the independent variables  $X_1$  to  $X_k$  and

$e$ =Error term representing unobserved variables that influence dependent variable.

The quantity  $P/(1 - P)$  is called the odds.

In the current study the binary logistic analysis was used to identify the relationship between general information variables and the interest to participate in entrepreneurial training programmes. The form of the logistic regression equation estimated in the study was,

where,

$$Y_i = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + U_i.$$

$Y_i = Y = 1$ ; Interested to participate in entrepreneurial training programmes;

$Y = 0$ ; Not interested to participate in entrepreneurial training programmes;

$X_1 =$  Age

$X_2 =$  Marital status

$X_3 =$  Educational qualification

$X_4 =$  Family type;

$X_5 =$  Monthly income of the respondents;

$X_6 =$  Family income;

$X_7 =$  Land holdings;

$X_8 =$  Place of residence;

$X_9 =$  Occupation;

$X_{10} =$  Self Help Group membership and

$U_i =$  Error term.

The binary logistic equation was estimated by using IBM 24.00 version.