EVALUATION OF THE TRAINING PROGRAMMES UNDER TRAINING AND VISIT SYSTEM IN KERALA

by

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THESIS

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DECLARATION

I hereby declare that this thesis entitled "Evaluation of training programmes under Training and Visit system in Kerala" is a bonafied record of research work done by me during the course of research and that the thesis has not previously formed the basis for the award to me of any degree, diploma, associateship, fellowship or other similar title of any other University or Society.

M. RAJABABU

Vellayani,

8-3 -1984.

C E R T I F I C A T E

Certified that this thesis entitled "Evaluation of training programmes under Training and Visit system in Kerala" is a record of research work done independently by Sri. M.RAJABABU under my guidance and that it has not previously formed the basis for the award of any degree, fellowship or associateship to him.

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C O N T E N T S

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ABBREVIATIONS

ADs - Agricultural Demonstrators

DSMS - District Subject Matter Specialists

JDAs - Joint Directors of Agriculture

JAOs - Junior Agricultural Officers

SDAO - Sub-divisional Agricultural Officer

SMS - Subject Matter Specialists

T & V system - Training and Visit System.

INTRODUCTION

CHAPTER-I

INTRODUCTION

India being primarily an agrarian country has tasted the fruits of success as well as the bitterness of setbacks in agricultural production. Despite sustained efforts in agriculture and the remarkable improvements made in agricultural technology over the past several decades, India is still in the grip of fluctuating agricultural production. One of the reasons that can be attributed to this situation is the illiterary and poor socio-economic status of our farmers, which ultimately led to their slow progress in the field of modern agriculture. Thus the gap between them and the research achievements in the improved agriculture widened, adding fuel to the fire.

At this stage many scientists, economists and administrators pronounced that one of the major factors impeding efforts to increase production through the spread of the new technology in our country, is the inadequate extension machinery in the states, connecting the poor and illiterate farmers with the improved agricultural practices.

Steps required for strengthening agricultural extension machinery in the states have been examined recently by National Commission on Agriculture. They have stressed the need for a re-organised extension machinery which can bridge the gap that is existing between the farmers' field and the research achievements.

In this context, a centrally sponsored scheme for strengthening and re-organisation of agricultural extension administration in the states has been approved by the Government of India for implementation in all the states during the sixth plan period. This scheme is based on the new agricultural extension methodology developed by Daniel Benor known as the "Training and Visit system". This system has been introduced in projects assisted by the World Bank in a number of countries including India with good results.

In India, it was first introduced in Kota of Rajasthan and Chambal in Madhya Pradesh in the year 1974. It is now being rapidly adopted in other states also.

The basic extension technique recommended in the T & V system is a systematic programme of training to

agricultural extension personnel combined with their frequent visits to farmers' fields. The system is organised to give intensive training in those specific agricultural practices and recommendations relating directly to farm operations during each fortnight. This system helps in extending low cost improved agricultural technology to the farmers besides educating them on the importance of the improved agricultural practices in increasing the agricultural production and their farm income.

This programme, with this basic extension technique was launched in Kerala in Trivandrum, Quilon and Alleppey districts on a pilot basis in the year 1981 and was subsequently extended to the remaining districts in the year 1983.

Need for the study

The T & V system, being a new programme of recent times that has been introduced in Kerala two years ago, an evaluative study of this type is needed in order to know the effectiveness of trainings conducted under the T & V system as well as the extent of importance the extension personnel attach to each component of training and to what extent they are performing their roles.

With this idea, the following objectives have been formulated for the study.

1. To analyse the major training components, namely, the trainer, the trainees and the subject matter and other related components within the T & V system.
2. To study the perception and performance of these training components by the trainees towards achieving effective training programmes within the T & V system.
3. To analyse the methodology of training and the transfer of technology within the T & V system as perceived and employed by the trainees.
4. To find out the relationship between the perception and performance of the trainees with their personal characteristics.

Limitations of the study

Though the T & V system was implemented all over the State, now the study has been confined to only three districts viz., Trivandrum, Quilon and Alleppey districts, since it was in operation in the three districts for the last two years. Hence the findings will not apply to a

total situation in the State. Since no specific studies have been undertaken on the training side of the T & V system in particular, the review available in this area is very meagre.

Scope for future work

In depth studies could be done on the major training components namely, 'Training Methodology' and 'Transfer of Technology' which will be helpful in exposing the existing drawbacks in the operation of the training programmes under the T & V system. A detailed study also can be undertaken in the same line throughout the State. Evaluation of both Monthly workshops and Fortnightly training programmes separately is also a possible area of research.

Presentation of the study

The presentation of the remaining chapters of this study and the contents of each chapter are as follows:

In Chapter II, which follows this chapter, the theoretical orientation and definition of concepts are furnished.

Chapter III deals with the methodology in which details regarding sampling, data collection, empirical measures used etc. are given.

In Chapter IV, the results of the study in relation to the objectives are presented.

Chapter V is connected with the detailed discussion of the results obtained.

Chapter VI presents a summary of the entire study emphasising salient findings.

THEORETICAL ORIENTATION

CHAPTER II

THEORETICAL ORIENTATION

The objective of this chapter is to discuss in broad outline the conceptual frame of reference used for this study. This serves as a basis in deciding the kind of data to be collected and helps in summarising what is already known regarding the problem under investigation. This chapter explains the theoretical perspective adopted for this study and attempts to link it with the relevant findings of other related research studies on this subject.

In accordance with the specific objectives of this study the review of past studies have been presented under the following headings:

I. The concept of training and training under T & V system.

II. Perception of Training Methodology by the T & V personnel.

III. Perception of Transfer of Technology under T & V system by the T & V personnel.

IV. Studies on the perception of job by the T & V personnel.

V. Performance of the personnel working under the T & V system.

VI. Association between perception and performance of T & V personnel.

VII. Personal characteristics of T & V personnel and its relationship with the perception of training methodology and transfer of technology under T & V system and their perception on job and performance.

VIII. Theoretical concepts and definition of variables.

I. The concept of training and training under T & V system

a. Training

The term 'training' has been defined by different authors in connection with various fields of activities.

According to Charles (1938) training becomes that part of the experience of an individual whereby he learns successfully to carry on any gainful occupation.

Hall (1954) defined employees' training as the process of aiding employee to gain effectiveness in their

present or future work; the development of appropriate habits of thought and action, skills, knowledge and activities.

Flippo (1961) has described training as the act of increasing the knowledge and skill of an employee for doing a particular job.

Taylor (1961) elaborated the meaning of training as the means to bring about a continuous improvement in the quality of work performed by the staff and the individual. It should equip the leaders with necessary knowledge, skills or abilities and attitude to perform his job.

According to Lynton and Pareek (1967) training is primarily concerned with preparing the participant for certain lines of action which are delineated by technology and the organisation in which he works. The focus in training is on internalising the skills for action by giving opportunities to participants, to practice the new skills in situations resembling the complexities of real life.

Bennis (1969) conceived training for organisation development as a small group effort designed to make its participants more aware of themselves and of group process.

The group works under the guidance of a professionally competent behavioural scientist and explores group processes and development by focussing attention on the experienced behaviour of its members.

Peter (1972) observed that training is learning job which is a socialisation process by which the individual acquires knowledge, attitudes and skills to meet the expectation of those who influence his behaviour.

Combs and Ahmed (1974) envisaged that training emphasises a more systematic and deeper learning of specific skills and related knowledge.

Rao (1975) defined training as a kind of learning process where a selected group of individuals undergo learning experiences to internalise the skills, resulting in modification of behaviour towards job performance.

According to Aslam (1979) training for skill development tries to bridge the gap between the existing skills and the new technology on one side and develop skills among the unskilled on the otherside.

Sobhana (1982) defined Junior Agricultural Officers' training as any kind of training given to JAOs with the intention of improving the efficiency of their present or future work as an extension agent.

For the purpose of this study, training has been operationally defined as "the process of updating the know-how of extension personnel through monthly workshop and fortnightly training programmes in order to enable them to transfer the technology to the farmers."

b. Training under T & V system

Benor (1977) explained the training under T & V system, as a systematic programme of training of the Village Extension Worker (VEW) combined with frequent visits by him to farmers' fields. The system is organised to give the VEW intensive training in those specific agricultural practices and recommendations relating directly to farm operations during a given week (or fortnight) by Subject Matter Specialists, who in turn will be receiving training from a team of experts in the field of agriculture (Resource personnel) in every month.

Baweja (1981) regarding training in T & V system has stated that the basic requirement of the system is for specific training relevant to the situation and at frequent intervals as per schedule. It offers better opportunity to extension workers for developing professionalism and acquire skills and confidence.

Thus the training that is being given to the extension personnel working under the T and V system aims at building up their technical skills regularly and precisely through monthly workshops and fortnightly trainings, helping them to transfer the knowledge they acquired through these trainings effectively to the farmers.

II. Perception of Training Methodology by the T & V personnel.

There is no direct review available on the perception of "Training Methodology" by the T & V personnel in the context of T & V programme. However some of the related studies were reviewed here.

Perception according to Crow and Crow (1956) is the meaningful sensation that assumes an important role in the life of an individual.

Perception according to Mitchell (1978) is that factor that shape and produce what we actually experience.

Manoharan (1979) in a study on the role of leadership in agricultural development in rural areas in Kerala defined role perception as the personal value towards leaders own activities regarding agricultural development.

For the purpose of this study perception is defined as the respondent's indication of what he or she feels important to do with reference to any statement presented to him in the context of training under T & V system.

In this study 'Training Methodology' is considered as a major concept of T & V training and it is operationally defined as "the process for the transfer of technology followed in monthly workshops and fortnightly training programmes in terms of messages and impact points to persuade the farmers to adopt".

Minor concepts under the 'Training Methodology' and the studies related to their perception by T & V personnel were given below.

a. Training objective

Aiken (1952) observed that the most effective agent is one who has a clear concept of objectives for his programme.

Leagans (1952) suggested that the extension worker should have a better understanding of extension and its educational role.

Griffith (1961) observed that the largest percentage of Formula Feed Operators in Kansas perceived extension as an agency set up to provide farmers with answers to problems as they arise.

Denhert (1961) reported that agricultural committee members with more than high school training had better understanding of the purpose of extension than those having training upto high school.

Sinha (1966) observed that 55.9 per cent of Village Level Workers had correct understanding of the concept and purpose of farm planning in package programme.

Thakur et al. (1970) while studying the extension personnel perception of package programme observed that the majority of respondents lacked correct understanding of the concept of package programme.

A study conducted by Extension Education Institute in Andhra Pradesh (1979) revealed that every official under the T & V system is having clear concept, philosophy and potentialities of the system.

For the purpose of this study training objective is operationally defined as "a directive or goal set for both monthly workshop and fortnightly training programmes with a definite purpose of achieving effective transfer of technology".

b. Training content

Benn and Aiken (1953) revealed that the three areas of content preferred by agricultural agents for further

inservice training were in the following order.

1. Improvement of techniques and skills on the job.
2. Subject matter.
3. Social sciences

While suggesting the guide syllabus for the trainees by the central worskhop held at Mashobra (1962) the following suggestions in the preparation of syllabus were outlined.

1. Topics should be picked up from the guide; Research reports should be studied.
2. Opinions in the areas of deficiency should be obtained from the field personnel and suggestions incorporated.
3. On arrival, the deficiencies of trainees should be known through a test and topics formulated covering such deficiencies.
4. Trainees should be asked to give their own requirements.
5. Instructors should present a list of new advances and techniques to be outlined in the syllabus and
6. Alternative syllabus should be developed for each batch using the above.

Regarding content and method of training programme, Ramkrishna (1965) emphasised that it should be such that it suits the level of intelligence, education, and understanding of the trainees and take into account the local needs and problems and the applicability of new techniques and solutions to the local situations.

The National Conferance held at Hyderabad (1966) mentioned that the syllabus should contain a list of problems faced by the gramsevaks and the methodology should be designed by the extension education institutes. It also stressed that the entire training of the gramsevaks should be problem and production oriented.

Sinha and Gill (1967) reported that due weightage should be given to the subject of extension education in the curriculum of VLWs training; otherwise the VLWs cannot be expected to communicate the agricultural innovations efficiently and effectively.

Sinha and Verma (1977) in a study in Bihar reported that majority (82 per cent) of the trainees were fully satisfied with the topics and contents covered in the training programme and 16 per cent had satisfaction to some extent.

Raman (1977) suggested that the content of peripatetic and institutional trainings should be well planned taking into account the local needs and problems and applicability of new techniques and to make the trainings more effective and successful, a combination of methods such as demonstrations, discussion and field trips could be used.

Patel and Kher (1978) in a evaluative study found that nearly equal number of respondents were both fully satisfied as well as satisfied to some extent with topics and content covered in the training programme.

In a evaluative study of T & V conducted by Extension Education Institute, Hyderabad in Andhra Pradesh (1979) found that -

1. The subject matter covered in some instances was not new, having been repeated during earlier sessions.
2. The time allotted for each session during training was not being properly utilised.
3. No systematic effort was made regarding the preparation of lesson plans in the training.
4. The training programmes were being conducted either in the villages or at the Office of Assistant Director of Agriculture with no adequate and proper arrangements.

In this study training content is defined as "a structural content denoting organisation, pattern and course content of monthly workshop and fortnightly training programmes under the T & V system ".

C. Treatment

Hearne (1957) suggested that the training process should be based on the fundamental principle that people learn by seeing with the eyes, hearing with the ears and doing with the hands and the mind. He also stressed that teaching should make use of practical demonstration including direct action and participation of the trainees. Intensive use of visual aids, such as charts and models was also recommended by him.

Baweja and Bhandari (1961) stressed that practicals conducted at the gramsevak training centres should be more educational and should achieve the objective of imparting proper knowledge, skill and attitude to the trainees.

Seethalakshmi (1966) found that more time was spent in class-room teaching than informal methods.

Bhaskaran (1966) in a study observed that a great majority of the trainees felt that the treatment of the syllabus was effective and that their understanding of

the extention education and community development improved as a result of these courses.

The annual meeting of State principals of gramsevak training centre held at Kalahasti, Andhra Pradesh (1967) suggested modification of the syllabus, as the trainers expressed difficulty to rigidly adopt 20 per cent of the time for theory and 80 per cent for practical classes. It was recommended that the ratio is to be changed as 40 per cent theory, 40 per cent practicals and 20 per cent discussions.

Sinha and Gill (1967) stated that too much emphasis on practicals without adequate base of theory may not lead to the desired outcome of the training.

Sidhu and Patel (1968) observed that more emphasis should be laid on practicals instead of lectures and opportunities to practice should be provided. They suggested a duration of half an hour for lectures, three fourth of an hour for group discussion, one and a half hours for practicals.

Sohal and Yanaki (1970) emphasised that more emphasis should be given on practical training.

Jha and Jani (1977) in their study on VLWs observed a greater emphasis given by the VLWs on practicals than on theory in almost all the subjects. The VLWs expressed their need for having more practical training in plant protection, livestock farming etc.

Sinha and Verma (1977) observed that 50 per cent of the trainees were not satisfied with the time allotted to discussion method. The trainees suggested that practical aspects of a subject should be given more emphasis than theoretical concepts.

A study of Extension Education Institute in Andhra Pradesh (1979) revealed that in the trainings conducted by Assistant Agricultural Officers to Village Extension Officers, the AAOs were devoting most of their time for discussions on targets and achievements rather than on operational solutions to the technical problems faced by VEOs.

For the purpose of the study ' Treatment' is defined as "an exercise and process of handling the training sessions within the monthly workshops and fortnightly training programmes".

d. Participation

Konnur and Somasundaram (1972) studied the activities that promote learning experiences in gramsevaks of Higher Training Course and found that 85.83 per cent of trainees participated in group discussion.

Pillai and Nair (1978) in a study in Kerala reported that out of a total of 86 non-formal educational workers 38 stated that they participated very much in the discussions 47 stated that they participated to some extent and one person frankly admitted that he could not take part in the discussions.

An evaluative study of T & V in Andhra Pradesh, conducted by Extension Education Institute (1979) revealed that at all the training sessions it is observed that the representatives of the input agencies or other development departments including agriculture department were not present. But the Assistant Agricultural Officers expressed that in this system (T & V) they are really involved in the challenging task of persuading farmers to adopt improved practices.

In the present context "Participation" may be operationally defined as "the nature and extent of involvement of both trainers and trainees in training programmes under T & V system".

e. Follow-up and Feed back

Leavitt and Mueller (1951) pointed out that accuracy on communication increased under free feed back conditions.

Schramm (1960) also emphasised the importance of feedback in successful communication.

Feffer and Suchotliff (1966) stated that communication accuracy was greater when the number of channels available for feedback from the addresser to the communicator was more.

Mehrabian and Reed (1973) hypothesised that accuracy of communication was correlated with the degree of availability of feedback to the communicator.

According to Chaterjee (1973) feedback is one of the factors associated with the effectiveness of the change agent.

Khare (1976) felt that feedback would be an important factor for improvement in quality of communication.

Pandyaraj (1978) in a study on the communication behaviour of Agricultural Extension personnel in Kerala reported that Junior Agricultural Officer received maximum information feedback during discussion with farmers mostly related with supply of inputs.

Renukaradhya and Somasundaram (1979) in a study in Bangalore district reported that the trainees felt that there was no proper follow-up undertaken by the trainers and extension agency.

The Extension Education Institute's study on T & V system in Andhra Pradesh (1979) revealed that the Subject Matter Specialists were able to give solutions to the problems raised by the trainees with confidence during the training sessions.

Dahama and Bhatnagar (1980) stated that for effective communication feedback is of paramount importance. An experienced communicator, they opined, is attentive to feedback and constantly modifies his message in the light of what he observes or hears from the audience.

In the present study this minor concept under "Training Methodology" is operationalised as "an activity of looking towards the proper flow of message at various levels within the process of transfer of technology to farmers with a returned response of information pertaining to successful adoption and problems pertaining to their practice communicated wiin the T & V system".

III. Perception of 'Transfer of Technology' under T & V system by the T & V personnel.

Perception of Transfer of Technology under T & V system is being considered as the other major concept apart from the Training Methodology, as every training programme includes this basic activity of Transfer of Technology.

For the purpose of this study 'Transfer of Technology' is operationally defined as 'the process of formulation and communication of messages and impact points on farming during the training sessions under the T & V system.'

The major concept 'Perception of Transfer of Technology' includes minor concepts like -

a. Knowledge of subject matter

b. Communication skill

c. Exercise design

There are no direct studies reported on the perception of above said three minor concepts of the major concept 'Transfer of Technology' under T & V system, but related studies are being reviewed and given below.

a. Knowledge of subject matter

English and English (1958) defined knowledge as 'a body of understood information possessed by an individual or by

a culture'.

Bhandari (1959) stressed that Agricultural Extension Officer should be equipped with thoroughness in technical knowledge as applies to local conditions.

Mundra (1966) in a study in Rajasthan reported that Agricultural Extension Officers are not sound in technical know-how in agriculture.

Sinha et al. (1968) analysing the pre-service training programme of Agricultural Extension Officers reported that the levels of both theoretical and practical knowledge of respondents was below mark.

Dahama (1968) stressed that extension workers must have thorough knowledge in the subjects for role performance.

Singh et al. (1971) in a study in which informal interviewing with Agricultural Extension Supervisors revealed that the SMS in different subjects had neither up-to-date knowledge about the recent advancement in their subject matter nor they were helpful in execution of development programmes in the subject of their specialisation.

Chakravarthy and Singh (1974) observed that level of technical knowledge of VLWs was one of the indicators of their role performance.

Patel and Somasundaram (1974) in a study on the impact of upgraded training course on gramsevaks in Madhya Pradesh reported that about 60 per cent of trained gramsevaks were rated 'good' in knowledge test, about 32 per cent 'average' and 8 per cent rated 'poor'.

Sohi and Sandhu (1976) in a study on the knowledge level of VlWs about agricultural practices reported that on an overall basis VLWs had inadequate knowledge about agricultural practices.

Pandyaraj (1978) observed no significant relationship between knowledge of Junior Agricultural Officers about high yielding varieties and their communication behaviour.

A study conducted by Extension Education Institute in Andhra Pradesh (1979) on T & V system revealed that subject matter specialists were good in their fields of specialisation and the level of technical knowledge of both Village Extension Officers and Assistant Agricultural Officers has been quite high as a result of the fortnightly training programmes.

Operationally knowledge of subject matter is defined as 'the information processed and acquired by the trainers and trainees of the T & V system on improved practices in agriculture'.

b. Communication skills

Sandhu et al. (1970) in a study on VLWs in Ludhiana reported that the concept of a method demonstration is not clear to the VLWs and that the procedure for phasing, conducting and follow-up are not properly and adequately followed by the VLWs.

Bhaskaranand Rao (1971) found that straight talk or lecture is being most frequently used, followed by group discussions, demonstrations, dictation of notes and talks.

Shree and Bhaskaram (1971) regarding knowledge about extension methods and materials and its use, they found that there was no significant difference between the Block Level Extension Officers and the Agricultural Extension Officers.

Singh and Jha (1971) pointed out that quite often young agricultural graduates were using a lot of technical and complex words while conversing with illiterate and less educated farmers.

Rao and Bhave (1972) in a study in Mysore district observed that VLWs knowledge of extension methods was very poor.

Dudhani et al. (1973) found that gramsevaks have assigned higher preference to demonstrations than to personal contact methods.

Singh (1973) in a study of key communicators of agricultural innovations found that communicators differed greatly in their communication skill and the communication skill was also found to be having influence on the communication effectiveness.

Parshad (1974) in a study on communication skills of VLWs of Punjab reported that majority of VLWs were having medium level of communication skills.

Patel and Somasundaram (1974) in a study found that majority of the trained and untrained gramsevaks used almost seven common methods for educating people viz. Farm and home visit, result demonstration, method demonstration, meetings held at demonstration plots, group discussion, office call and supply of literature.

Guruswamy and Bhaskaram (1975) found that the trained instructors were using audiovisual aids more frequently and systematically than the untrained instructors.

Sinha et al. (1976) found that there was no relationship between communication skill and effectiveness of village officials.

Tubbs and Moss (1977) observed that communication is effective when the stimulus as it was initiated and intended by the sender corresponds closely with the stimuli as it is perceived by the receiver.

Balasubramaniam and Menon (1977) reported that the most commonly used methods by the extension personnel were the preparation of leaflets and simple package of practices based on the information received.

Sanoria (1977) reported that Assistant Directors of Agriculture and Agricultural Extension Officers had low communication efficiency; but Deputy Directors of Agriculture were most efficient.

Perumal and Rai (1977) observed from a study that majority (64 per cent) of Deputy Agricultural Officers were average and 15 per cent were below average in their communication behaviour.

Pandyaraj (1978) found that extension personnel paid maximum attention for communicating information to the farmers.

Sawat and Thorat (1979) found that meetings, demonstrations, farm and home visits are the methods commonly used by the gramsevaks for dissemination of farm information.

In a study of Extension Education Institute on T & V system in Andhra Pradesh (1979) stressed the need to improve the communication skills of Subject Matter Specialists for which they should be given training for improving their communication skills.

Gupta (1980) reported that the VLWs preferred communication media giving top preference to 'field trips' followed by 'transistor sets' for transfering agricultural technology to farmers.

Jose Joseph (1983) in a study in Kerala reported that majority of the Agricultural Demonstrators belonged to the medium level of communication effectiveness.

In the context of present study 'Communication skill' as a behavioural concept, it can be defined as "the aptitude ability and expertise of trainers in conveying the information to the trainees during the training sessions within the T & V system".

c. Exercise design

'Exercise design' a minor concept of 'Transfer of Technology' is a new concept of its kind introduced in this study and developed by Gilbert (1962) under Mathetics process.

Gilbert (1962) explained the term 'Mathetics' as the systematic application of reinforcement theory to the analysis and reconstructionof those complex behaviour reportories usually known as "subject matter mastery", "Knowledge" and "skill".

Gilbert specifies four main stages in Mathetical process.

a. Prescription

A prescription is a description of mastery of performance in some subject matter area.

b. Domain Theory

It describes the essential properties of the subject matter. Describes the master performances' 'analytical observation'.

c. Characterisation

The characterisation process analyses the behaviour of the prescription in order to specify factors relevant to teaching design.

d. Exercise Design

The final step in the mathetical process. Gilbert considers it as a "frame writing" process and as a teaching strategy under programmed instruction.

For each operant (each stage) of Exercise design consists of a task - sub task - element- demonstrate - prompt - release sequence. This sequence is applicable for a wide variety of training situations. This sequence is suitable in a training programme given under the context of the T & V system.

As this concept is a new one of its kind, the researcher could not find any relevant studies on this and had tried only to know the perception of this concept by the extension personnel of T & V system in Kerala.

Exercise design as a minor concept, in the present study operationalised as 'a frame writing process and it is a basic teaching strategy of communicating information and demonstrating skills, involved in farming practices in a definite instructional sequence for mastery performance'.

IV. Studies on the Perception of job by the T & V personnel

As direct studies have not been reported in this line only a few related studies are reviewed here.

Dube (1958) observed that even the VLWs themselves were not clear about their actual position, role functions and responsibilities in Community Development Organisation.

Sultana (1967) in her study on level of understanding of jobs, found that mukhysevikas had better understanding of gramsevaks job.

Guttman (1971) while emphasising the significance of role perception, stated that perceiving is behaving.

He holds that the concepts of perceiving and behaving are systematically interchangeable.

For the purpose of this study, the dependent variable job perception is empirically defined as 'the degree of importance attached by the respondent to an item or statement presented to him reflecting his job in T & V system'.

V. Performance of the personnel working under T & V system.

Davis (1949) defined role performance as how an individual actually performs a task in a given situation as distinct from how he is supposed to perform.

Levine and Kantor (1962) emphasised that job performance of a worker depends on the fullest utilization of his abilities and also on the social expectation of the environment in which he works.

Lynch (1971) stated that any performance of an individual is basically a function of both his abilities and his motivation.

Singh et al. (1971) reported that all the three groups of Agricultural Extension Supervisors appeared to be of the opinion that the performance of District SMS as a trainer was not at all satisfactory. They also reported

that the officials associated with SMS opined that the SMS were not of much help in communicating the recent advancement in the field of specialisation.

Kolte (1972) in his study in Rajasthan found that 56 per cent of Agricultural Extension Officers were below average in their performance.

Chowkidar (1973) studied the role performance of VLWs and found that the VLWs were not competent to perform their role in agricultural development effectively.

Patel and Somasundaram (1974) reported that 55 per cent of trained gramsevaks were rated as 'effective' with reference to job performance and the remaining less effective.

Goodale (1975) supported the assessment of an employees' job performance as it is important both for the worker and his superior for understanding the level of efficiency in the job.

Kanagasabai and Subrahmanyam (1975) concluded from a study conducted in Tamil Nadu that 48 per cent of Deputy Agricultural Officers were less efficient in their performance.

Kherde and Sahay (1979) observed that the VLWs rated their role performance as good and very good in all the major eight roles.

A study of Extension Education Institute in Andhra Pradesh on T & V system (1979) revealed that the officials are confident and capable of imparting practical knowledge and skills to the farmers and face them boldly.

Sobhana (1982) found that Junior Agricultural Officers working in coconut package units were having high level of performance closely followed by JAOs of Intensive Paddy Development Units and those of Special Agricultural Development Units.

For the purpose of present study performance operationally defined as 'the nature and kind of performance the extension personnel actually performs by virtue of occupying that particular position'.

VI. Association between Perception and Performance of T & V personnel.

Wilson (1956) observed that those officers who had no clear understanding of their role and the assistance they provided to the gramsevaks was unsatisfactory.

Wilkening (1958) found that the county agents indicated that there was considerable disagreement between (1) The role expectations by the local client system of

the county agent. (2) The agent's self definition of his role, for example, the change agents perceived their role as one of education, but their clients expected them to provide services also.

Rajagopalan (1965) in his study on nurses observed that the correct perception of the attributes of a role lead to a right role performance.

According to Pfiffner and Sherwood (1968) accuracy in role perception has a definite impact on effectiveness and efficiency in organisations.

Kherde and Sahay (1970) found that the perception of job was positively related with the performance of job of gramsevaks.

Hoebel (1972) found that person's behaviour was natural when one become habituated to all his roles to the point where he does not have to prepare himself to perform them.

Mitchell (1973) reported that behaviour was a function of one's perception and that changing perceptions would result in changing behaviour.

A study of Extension Education Institute in Andhra Pradesh on T & V system (1979) revealed that Assistant Agricultural Officers had a clear understanding of their

roles in new extension system and they felt that they are enabled to perform their roles effectively.

Sobhana (1982) found a significant positive relationship between role perception and role performance of the Junior Agricultural Officers in Kerala.

VII. Personal characteristics of T & V personnel and its relationship with the perception of training methodology and transfer of technology under T & V system and their perception on job and performance.

As studies establishing direct relationship between perception and performance and personal characteristics of T & V personnel were not available, related studies are reviewed and presented below under each independent variable.

1. Age

Wilkening (1957) reported that age of extension agents was positively related to their effectiveness in carrying out extension work in their county.

Frutchey (1958) observed that more effective and less effective workers did not differ significantly in their age.

Austman (1961) stated that age was positively associated with the effectiveness of VLWs.

Rahudkar (1963) noticed that a VLW older than 31 years had a record of better performance.

Sengupta (1963) found that age had no influence on the efficiency of village level workers.

Salvi and Dudhani (1967) reported that age of gramsevaks was not related to their effective performance.

Patel and Leagans (1968) opined that extension workers belonging to the age group of 26-35 years were more effective than those of other age groups.

Kherde and Sahay (1970) and Saigonkar and Patel (1970) found association between age and role performance of extension workers.

Kamalesan (1971) observed that majority of the trainees belonged to the younger age group.

Somasundaram (1971) revealed that age has no significant influence on role performance of agricultural leaders in Tanjavoor in Tamil Nadu.

Patel and Somasundaram (1974) found that the majority of the respondents are in the age group of 29 to 38 years and formed the largest group. The gramsevaks in the age group of upto 28 years showed highest level of knowledge followed by more between 29 to 38 years and those of 39 and above.

Kanagasabai and Subramanyam (1975) reported that District Agricultural Officers below the age of 30 years were less efficient when compared to those above 31 years. Those above 36 years were found more efficient.

Reddy (1976a)reported positive influence of age on the efficiency level of gramsevaks.

Rao and Reddy (1979) in a study on the impact of T & V in Andhra Pradesh found that majority of the officials belonged to younger age.

Sarkar and Reddy (1980) in a study on the impact of T & V in West Bengal found that majority of the officials belonged to middle age group.

Sobhana (1982) found that age of the JAOs is not related to their role perception and role performance.

2. Education

Aiken (1952) noted that the most effective extension agent had taken graduate training for his improvement.

Dube (1958) observed that a university graduate on the whole had not proved to be successful as a VLW.

Moe (1960) observed that the most effective extension agents were likely to have graduate training.

Austman (1961) concluded that the extension agents grade point average in high school and scholastic achievements in college were positively associated with their performance.

Rahudkar (1962) found that gramsevaks having higher secondary education fell in the most effective group, those below higher secondary standards were in the least effective group, while graduates were found to be mediocre.

Sengupta (1963) stated that general education alone was not a decisive factor in extension workers' job effectiveness.

Bison and Dahama (1965) reported that academic qualification affect the role perception and role performance of Agricultural Extension Officers.

Salvi and Dudhani (1967) remarked that the VLWs with relatively better educational status seemed to be effective in their job.

Patel and Leagans (1968) found that there was significant association between formal education and effectiveness of VLWs.

Kherde and Sahay (1970) reported that education of gramsevaks was negatively associated with their performance.

Somasundaram (1971) opined that education has some positive influence on the role performance of agricultural leaders, but the influence was statistically not significant.

Kanagasabai and Subramanyam (1975) found that professional graduates are more efficient than non-graduates in extension work.

Rajagopal (1977) reported that education of gramsevaks was not associated with their role performance.

Rao and Reddy (1979) in a study on T & V system in Andhra Pradesh reported that majority of the officials had college education.

Sarkar and Reddy (1980) in a study of T & V system in West Bengal reported that most of the officials fall under high school and undergraduate group.

Sobhana (1982) found a negative relationship of education with role perception and performance.

3. Experience

Barret (1926) and Frutchey (1958) quoted that more effective and less effective extension workers did not differ significantly in their tenure in extension work, while Rahudkar (1962) pointed out that gramsevaks with more than two years of service were found more effective than those with less than two years of service.

International Labour Organisation (1963) in a report stated that experience was not related to output of workers.

Salvi and Dudhani (1967) reported that the tenure in extension did not bear any association with effectiveness of VLWs.

Patel and Leagans (1968) found that the VLWs worked for more than five years were more effective.

Ernest (1970) observed that efficiency of extension workers increased with years of service.

Singh and Srivastava (1970) found that experience of extension personnel was not associated with the perception of nature of their job as educational by the extension officer.

Patel and Somasundaram (1974) in a study in Madhya Pradesh reported a positive relationship between the experience of the respondents and their gain in knowledge.

Kanagasabai and Subramanyam (1975) revealed that experience is one of the factors in deciding the effectiveness of extension worker.

Ramdas and Reddy (1975) reported that the Agricultural Extension Officers with more total service was more favourable towards district level training than Agricultural Extension Officers with less total service.

Perumal and Rai (1976) in a study on the job performanc of Agricultural Extension Officers in Tamil Nadu found that

experience had no significant correlation with the job performance.

Rajagopal (1977) reported that experience was not associated with the effective performance of gramsevaks.

Dubey et al. (1979) found that experience of stockmen had not contributed much to their knowledge of different subject matter areas.

Sobhana (1982) found no relation between experience and role perception and role performance of Junior Agricultural Officers in Kerala.

4. Trainings acquired

Nye (1952) stated that training was one of the factors positively associated with job effectiveness.

Halsey (1956) remarked that it was the over all objective of every training programme to cause people to become interested in their work and to aid them to acquire knowledge and skill necessary to do that work well.

Sharma and Pisharody (1964) reported that gramsevaks who received two years of integrated training were more suited to their job as compared to others who had six months or one and half years training.

Verheij (1966) found that the performance of our extension worker is influenced by the trainings he has received.

Salvi and Dudhani (1967) felt that the VLWs with a longer jobtraining tended to be effective in their job.

Patel and Leagans (1968) observed that more effective VLWs had undergone extension training.

Kherde and Sahay (1970) found significant relationship between inservice training of extension personnel and their job performance.

Saigonkar and Patel (1970) stated that the success of VLW was related to the duration of pre-service training.

Singh and Srivastava (1970) found in their research among extension personnel that formal training to Extension Officers in agriculture has been responsible for better understanding of their job.

Singh et al. (1971) reported that majority of SMS did not receive special training in the subject matter in which they were posted as specialists.

Kanagasabai and Subramanyam (1975) reported that there was significant association between the number of trainings and efficiency of Deputy Agricultural Officers in Tamil Nadu.

The report of the National Commission on Agriculture (1976) emphasised the importance of inservice training to the extension officers for providing specialised guidance to the subordinates and farmers.

Reddy (1976b)reported that there was no significant relationship between the communication behaviour of VLWs and their duration of pre-service or inservice training.

Dubey et al. (1979) in a study on the stockmen in Haryana found that special training imparted to stockmen had not made any improvement in the knowledge level in different areas of subject matter.

Sobhana (1982) found that training was not related to role perception and role performance of the JAOs in a study in Kerala.

5. Job satisfaction

Katzell (1964) defined job satisfaction as the verbal expression of the incumbents evaluation of his job.

Sarkar and Patnaik (1967) found that VLWs placed maximum importance on such factors as opportunity for promotion and salary according to work achievement.

Chakravarthy (1971) found that 53 per cent of the Agricultural Extension Officers were satisfied with their job and the rest were dissatisfied.

Kolte (1972) found no relationship between job satisfaction and job performance.

Subhalakshmi and Singer (1974) reported that nearly two third of the gramsevaks were either very much satisfied or satisfied with their job, nearly 20 per cent were dissatisfied or very much dissatisfied.

Jalihal et al. (1975) observed that about 74 per cent of the gramsevaks were satisfied with the time spent by them on educational activities.

Muthayya and Gnanakannan (1975) found that most of the gramsevaks had expressed dissatisfaction with regard to social facilities such as cost of living and housing in the place of work, medical facilities and physical living conditions.

Perumal and Rai (1976) reported that there is no significant relationship between job satisfaction and the performance of Agricultural Extension Officers in Tamil Nadu.

Reddy (1976) reported that only a few VLWs were satisfied with the guidance given to them in respect of

their field work, job responsibility and in their professional growth. The results further revealed that the VLWs were not satisfied or only some what satisfied with the method of communication, freedom to exchange ideas and feedback facilities.

Sinha et al. (1976) found that job satisfaction had significant and positive relationship with communication effectiveness of district and block level officials only in some areas.

Sanoria (1977) studied the communication efficiency of agricultural extension personnel working in the agricultural department of Madhya Pradesh and found positive and significant relationship between job satisfaction and communication efficiency.

Rajagopal (1977) found that 50 per cent gramsevaks had more job satisfaction while the remaining 50 per cent had less job satisfaction.

Dhillon and Sandhu (1977) observed significant relationship between job satisfaction and job effectiveness of extension specialists of a farm advisory service.

An evaluative study of T & V system in Andhra Pradesh conducted by Extension Education Institute (1979) revealed

that the Village Extension Officer were not satisfied with their pay scales, promotional avenues and other facilities like quarters and conveyance.

Alagesan and Knight (1979) in a study conducted in Tamil Nadu found that agricultural graduates are satisfied with the service security, leave facilities and benefits like Provident fund and pension attached to their jobs at present.

Sarkar and Reddy (1980) in a study on the impact of T & V system in West Bengal reported that majority of the officials opined that lack of status, facilities, incentives for T & V officials were some of the factors standing in the way of the success of the T & V system.

VIII. Theoretical concepts and definition of variables.

A. Dependent variables

1. Perception

a. Training Methodology

Perception of Training Methodology is the respondents' indication of what he/she feels important to do with reference to any statement presented to him/her with reference to the Methodology of Training under T & V system.

b. Transfer of Technology

Perception of Transfer of Technology is the respondents' indication of what he/she feels important to do with reference to any statement presented to him/her with reference to the transfer of technology under T & V system.

B. Independent variables

1. Age

It is defined as number of completed years of age by the respondent at the time of investigation.

2. Education

It is defined as the formal education received by the respondents from SSLC upwards.

3. Experience

It is the period in completed years for which the extension personnel had been in service.

4. Trainings acquired

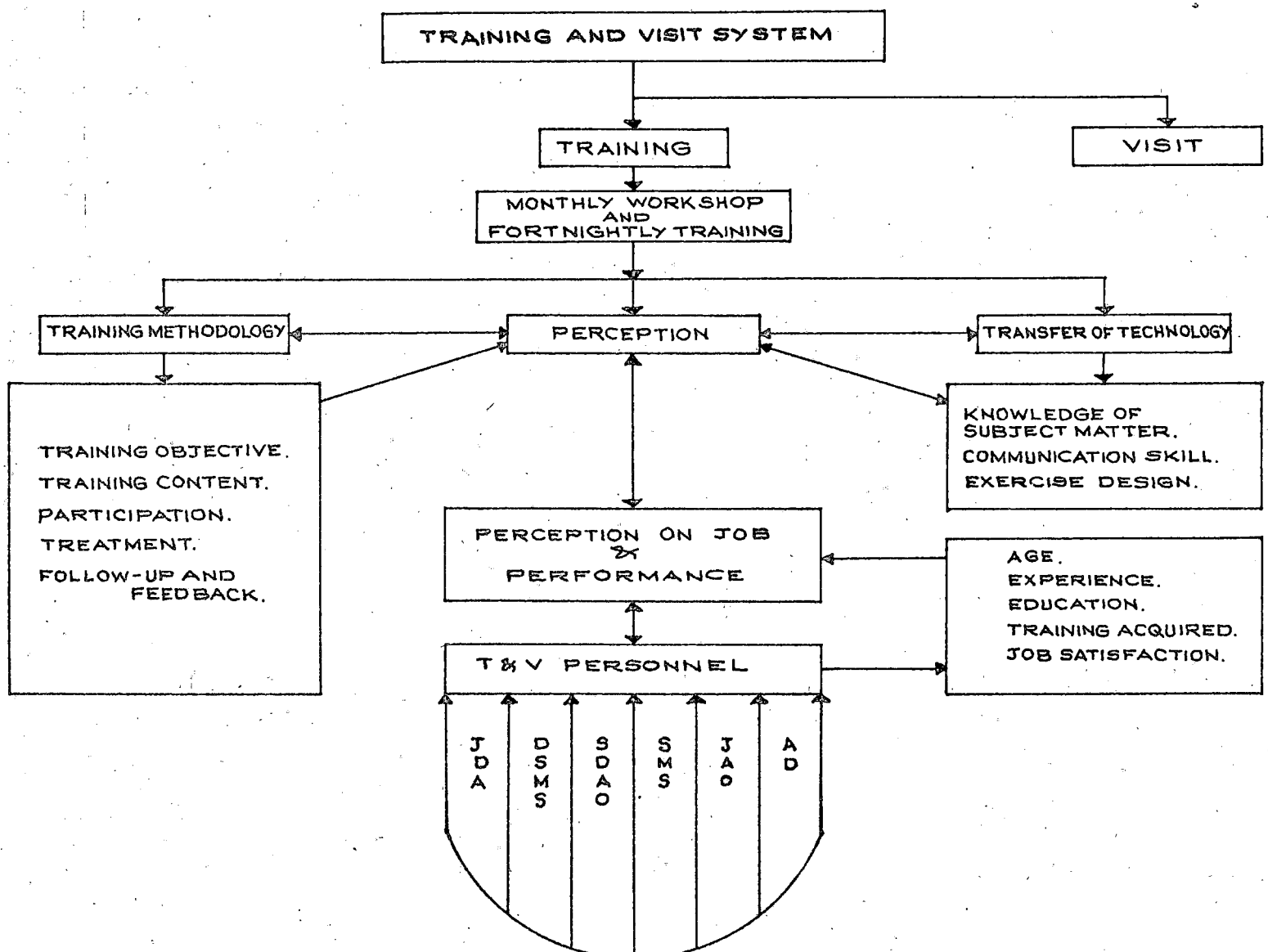
It is defined as the number and kind of trainings undergone by respondents at the time of investigation, excluding T & V training.

5. Job satisfaction

It is defined as the indication of individuals inherent feeling about ones own job as a result of the nature of various attributes the person holds towards the job.

Theoretical model showing the relationship between the concepts selected for the study is shown in Fig. 1.

FIG. 1. MODEL SHOWING THE RELATIONSHIP BETWEEN THE CONCEPTS SELECTED FOR THE STUDY.



METHODOLOGY

CHAPTER III

METHODOLOGY

This chapter deals with the materials and methods employed in the study which are presented under the following headings.

1. Location of the study.
2. Sampling procedure for the study.
   A. Selection of Sub-divisions.
   B. Selection of respondents.
3. Selection of action statements/items for analysing 'perception of Training Methodology and Transfer of Technology' under T & V system.
4. Delineating items for each category of respondents for analysing 'Perception on job' and ' performance'.
5. Variables selected and their measurement.
   a. Dependent variables
   b. Measurement of dependent variables
   c. Measurement of independent variables
6. Data collection procedure.
7. Statistical analysis used.

1. Location of the study

Kerala State comprises of 13 districts. Among them Trivandrum, Quilon and Alleppey were the first three districts

in the State where the "Training and Visit system" was implemented in the year 1981 under the name of Kerala Agricultural Extension Project (KAEP), subsequently it was extended to other districts of the State in the year 1983.

The study was confined to Trivandrum, Quilon and Alleppey districts as shown in Fig.2 where the T & V system was in operation for the last two years. The other districts were purposely avoided since the system was in operation only for the last few months.

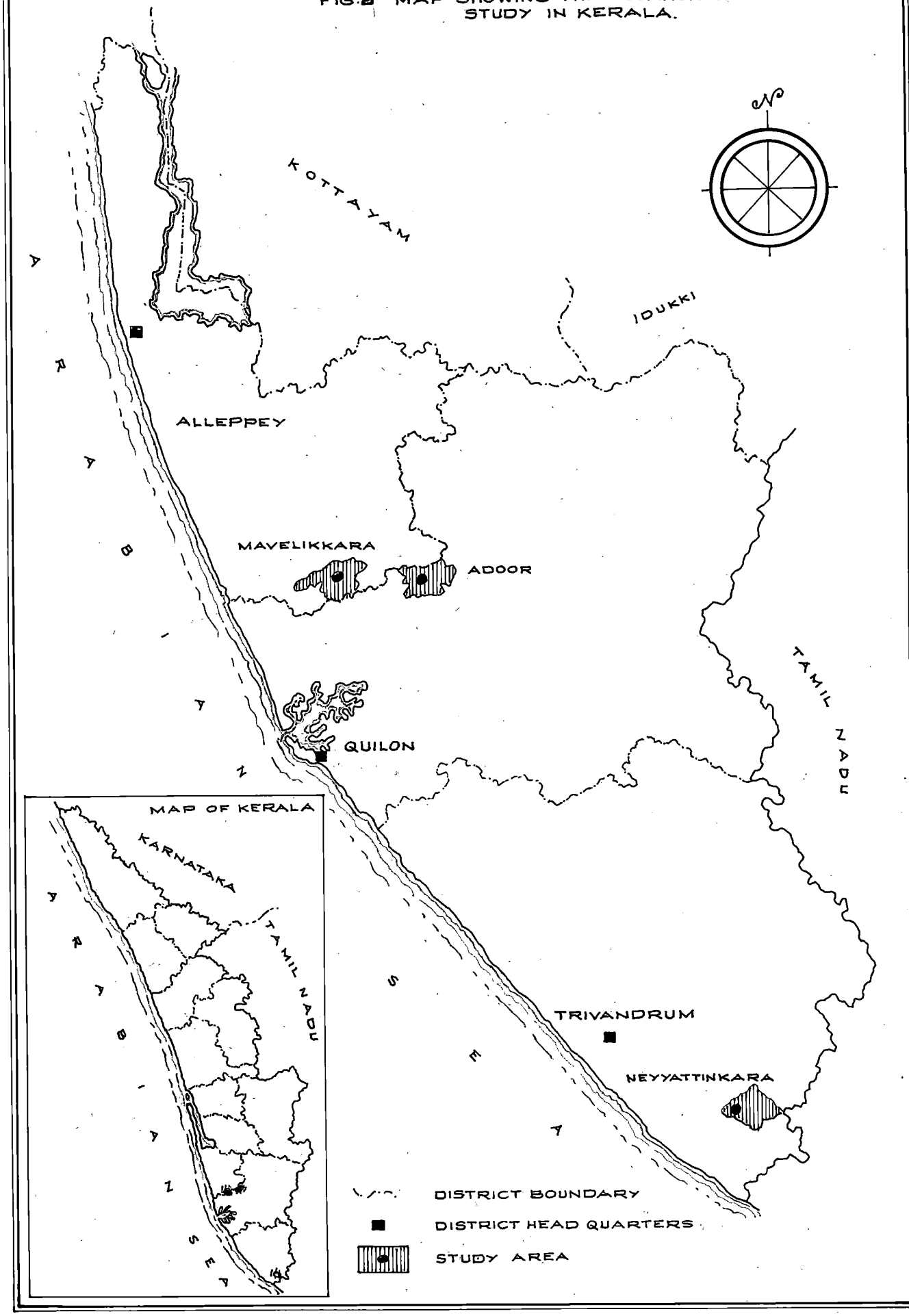
2. Sampling procedure for the study

A. Selection of Sub-divisions

The three districts under study comprised of three agricultural sub-divisions each. The agricultural sub-divisions under each district and their names are given below.

District	Agricultural sub-divisions
1. Trivandrum	a. Nedumangad
	b. Neyyattinkara
	c. Attingal
2. Quilon	a. Quilon
	b. Adoor
	c. Kottarakara

FIG.2 MAP SHOWING THE LOCATION OF THE STUDY IN KERALA.



3. Alleppey	a. Alleppey
	b. Mavelikkara
	c. Changanacherry

Among these agricultural sub-divisions one agricultural sub-divisions from each district was selected by random sampling procedure; thus the selected sub-divisions include Neyyattinkara from Trivandrum district, Adoor from Quilon district and Mavelikkara from Alleppey district.

B. Selection of respondents

Each agricultural sub-division under study had two units viz., Agricultural Extension Units and Agricultural Development Units. The break-up of these units under each sub-division was given in Table below.

Table 1 - Break-up of the units in the three sub-divisions under study

Sub-division	Agrl.Development Units.	Agrl.Extension Units
1. Neyyattinkara	10	10
2. Adoor	14	14
3. Mavelikkara	7	7

Each sub-division consisted of the following categories of extension personnel who were directly involved in the fortnightly training programme of T & V system.

1. Sub-divisional Agricultural Officer
2. Subject Matter Specialists
3. Junior Agricultural Officers
4. Agricultural Demonstrators

All the above mentioned categories of extension personnel who take part in the fortnightly training programmes were taken as the sample for the study.

Besides at sub-divisional level, the study also included the Principal Agricultural Officer (JDA) and District level Subject Matter Specialists. These two categories of respondents along with the Subject Matter Specialists and the Sub-divisional Agricultural Officer were taking part in the district level monthly workshops.

Various categories of respondents at sub-divisional level and their number under each agricultural sub-division included in the study are given in the Table 2.

Table 2 - Categories of respondents and their number under each agricultural sub-division

S.No.	Category	No.of respondents			Total
		Neyyattin-kara	Adoor	Maveli-kkara	
1.	Sub-divisional Agricultural Officer	1	1	1	3
2.	Subject Matter Specialists	4	5	4	13
3.	Junior Agricultural Officers				
a.	Development Units	6	14	7	27
b.	Extension Units	10	14	7	31
4.	Agricultural Demonstrators				
a.	Development Units	10	14	7	31
b.	Extension Units	50	65	43	158
	Total	81	113	69	263

The category of respondents at district level are presented in Table 3.

Table 3 - Categories of respondents and their number at district level

Category	Number of respondents			Total
	Trivandrum	Quilon	Alleppey	
a. Principal Agricultural Officer (JDA)	1	1	1	3
b. District Subject Matter Specialists	3	3	3	9
Total	4	4	4	12

The study thus included the whole population of various categories of extension personnel numbering 275 working under the T & V system both at sub-divisional level and at district level.

3. Selection of action statements/items under Training Methodology and Transfer of Technology of the T&V syste

In the present study "Training Methodology" was divided into five sub-concepts and " Transfer of Technology" into three sub-concepts under T & V system. This has been done after consultation with the experts in the field of agriculture working in the State.

The sub-concepts under Training Methodology and Transfer of Technology were presented below.

I. Training Methodology

a. Training objective

b. Training content

c. Treatment

d. Participation

e. Follow-up and feedback

II. Transfer of Technology

a. Knowledge of subject matter

b. Communication skill

c. Exercise design

It was assumed in this study that the cumulative effect of all the above said sub-concepts will reflect functions performed under the methodology of training and the process of transfer of technology being adopted both in monthly workshops and fortnightly training programmes of the T & V system.

About 144 statements were prepared after reviewing the available literature on T & V system and in consultation with experts in the agriculture department working under T & V system and that of the agricultural University.

These statements were prepared within the purview of sub-concepts under Training Methodology and Transfer of Technology. The statements so prepared, reflected the functions/activities involved in the monthly workshop and fortnightly training programmes of the T & V system. These statements were framed to include the universe of content anticipated by the objectives spelled out under the T & V system. The various statements thus prepared were edited in order to eliminate the items failing to meet the prescribed standards. By editing 15 statements were eliminated. Accordingly 129 statements were selected. The 129 statements thus selected were presented to a group of 30 judges consisting of officials in the department of agriculture viz., Joint Directors of Agriculture, Deputy Directors of Agriculture, Assistant Directors of Agriculture, Junior Agricultural Officers and the Extension Specialists of Extension Division, College of Agriculture, Vellayani and the Scientists of other departments who were the resource personnel for the monthly workshops being conducted in the College of Agriculture, Vellayani every month.

The judges were requested to judge the relevance of each statement presented to them on a dichotomous scale denoting 'Relevant and Not-relevant'. A score of 'one' was

given to the 'Relevant' response and 'zero' to 'Not-relevant' category. The Judges were requested not to express their opinion, but merely to judge the degree of relevance of irrelevance expressed by each statement with regard to the 'methods of training' and 'transfer of technology' being followed during monthly workshops and fortnightly training programmes under T & V system.

The responses from judges thus collected were statistically analysed. The 'x^2' test was used, based on which eighty three statements were found to be significant and were selected for the study. (Appendix I)

4. Procedure followed to delineate items for each category of respondents for analysing 'Perception on Job' and 'Performance' by them respectively.

The statements thus selected were given to another group of Judges consisting of Deputy Directors of Agriculture and Assistant Directors of Agriculture working in T & V system who delineated the selected statements as action statements involved within the job of each category of personnel working under T & V system.

Thus the Judges were presented with the '83' statements and they were requested to express their relevance to the job performed by the six categories of T & V personnel under study viz., AD, JAO, SMS, SDAO, DSMS and JDA. If a particular statement involves the action by more than one category of respondents, the judges were requested to mark the response against all the relevant categories.

Thus based on the frequency of responses by the Judges, action statement for each category of respondents were selected in order to measure their perception on the job and their performance within the T & V system. Correlation was worked out between the 'Perception on the job' and ' Performance' by the various categories of respondents within the T & V system.

5. Variables selected and their measurement

a. Dependent variables

i. 'Perception' of training methodology and transfer of technology by the extension personnel working under T & V system.

ii. 'Perception on the job' by the extension personnel working under the T & V system.

iii. 'Performance' of extension personnel working under

b. Measurement of dependent variables

i. 'Perception' of Training Methodology and Transfer of Technology by the extension personnel working under T & V system

All the selected items were presented before the respondents for rating them on a five point continuum based on the importance they might attach to each action statement under Training Methodology and Transfer of Technology of the T & V system. The five responses in the continuum and their scoring pattern followed were as follows.

Very important	- 4
Important	- 3
Undecided	- 2
Less important	- 1
Not important	- 0

Singh and Arya (1968) studied the perception of leadership behaviour with the help of two instruments namely paired comparison method and rating scales.

The same procedure as being followed by the researcher was used by Thakur et al. (1970) to measure the perception of extension personnel about the package programme.

Waghmare and Patel (1974) developed a similar scale to measure the perception of administrative organisation principles.

ii. 'Perception on the Job' by the extension personnel working under the T & V system.

The rating scale followed to measure the 'Perception' on the Job had also similar continuum and scoring pattern as given below.

Very important	- 4
Important	- 3
Undecided	- 2
Less important	- 1
Not important	- 0

Intodia and Shaktawat (1980) measured the role perception of Sarpanchas in Rajasthan by administering a structured schedule specially developed for the purpose.

Jayaraman and Menon (1973) used the same rating procedure to measure the role perception of Deputy Agricultural Officers in Tanjavur District of Tamil Nadu.

Muthaiah (1979) studied the role perception of leaders using a role perception schedule.

Sobhana (1982) measured the role perception of Junior Agricultural Officers in Kerala by the same rating procedure as followed in the present study.

iii. Measurement of 'Performance' of the extension personnel working under T & V system.

Singh et al. (1967) measured the performance of VLWs on the basis of superior rating, self rating and rating by village leaders.

Sharma (1971) developed a 'Role performance schedule' to measure the role performance of Multipurpose Co-operative society leaders.

Chakravarthy and Singh (1974) used indicators of performance, of these two were of self rating type and one was superior officials rating.

Joy Mathew (1980) studied the performance of youth with reference to the ten roles identified, by asking the respondents to indicate how frequently they performed the roles. The responses were obtained on a three point continuum ranging from 'Always' to 'Never'.

Sobhana (1982) to measure the role performance of Junior Agricultural Officers a three point self rating scale was used.

In this study to measure the performance of extension personnel working under T & V system, the method of self rating used by Singh and Singh (1967), Chakravarthy and Singh (1974), Joy Mathew (1980), Sobhana (1982) was followed.

The statements relevant to each category of T & V personnel were presented to them and they were asked to rate them on a four point continuum as given below.

Always	- 3
Often	- 2
Sometimes	- 1
Never	- 0

c. Measurement of independent variables

i. Age

In this study age was measured as the number of years completed by the respondents at the time of investigation.

ii. Education

Bisen and Dahama (1965) measured education on the basis of academic qualification of the respondent.

Kanagasabai and Subramanyam (1975) credited the respondents with scores based on their academic qualification.

Similarly in this study education was measured by assigning scores for the academic qualifications acquired by the respondents as follows.

Upto SSLC	- 1
Upto PDC/Intermediate/Diploma	- 2
Graduation other than Agriculture	- 3
Graduation in Agriculture	- 4
Post-graduation	- 5

iii. Experience

Frutchey (1958) and Ernest (1970) measured experience in terms of number of years in service.

In this study experience was measured as the total number of years, rounded to the nearest year in service by the respondent at the time of the survey.

iv. Trainings acquired

For the purpose of this study, trainings acquired was measured by assigning scores to each type of training undergone and multiplying the scores obtained by the number of trainings undergone.

1. Pre-service training - 3

2. Inservice training

i. One month training and above - 2

ii. Less than one month - 1

iii. No training - 0

v. Job satisfaction

Muthayya and Gnanakannan (1973) measured the Job satisfaction of Development personnel by items covering three aspects viz., personal aspects including feelings of inadequacy, security, non-acceptance etc. the inter-personal aspects covering the interaction with superior people and non-officials and the Job aspects including pay, work opportunities, expectation etc.

Rathore (1974) developed job satisfaction scale to measure the level of job satisfaction of extension personnel.

Sinha et al. (1976) measured job satisfaction in terms of overall attitude of the respondent towards his job by asking direct questions such as whether he liked or disliked his job.

Jose Joseph (1983) adopted the scale developed by Rathore (1974) with slight modification to measure the

job satisfaction of agricultural demonstrators. Ten items reflecting different aspects of job were selected. The items were in the form of questions and the answers rated on a five point continuum ranging from 'very much satisfied'to 'very much dissatisfied'.

Here in this study, for the purpose of measuring 'Job satisfaction', the scale used by Jose Joseph (1983) was adopted with slight modification and the procedure followed was as follows:

Twelve items reflecting the different aspects of Job of extension personnel working under the T & V system were selected after discussing with experts who includes personnel from Department of Agriculture working under T & V system. These items include 'Authority to do Job', 'recognition','guidance from superiors', 'co-operation from colleagues', 'salary', 'promotion opportunities', 'transport facilities', 'housing and medical facilities', 'time and energy spent and satisfaction derived','work load in the Job','progress made in the Job', 'merit in the present job'.

Twelve questions were framed on the twelve items and the respondents were asked to mark their response on a five point continuum. The scoring pattern adopted as given below.

Fully satisfied	- 5
Satisfied	- 4
Undecided	- 3
Least satisfied	- 2
Dissatisfied	- 1

The Job satisfaction score for each respondent was computed by summing up the corresponding score to each answer.

6. Data collection procedure

A questionnaire was prepared in English and mailed to the Joint Directors of Agriculture, District Subject Matter Specialists, Sub-divisional Agricultural Officers, Subject Matter Specialists and Junior Agricultural Officers. For the Agricultural Demonstrators the same questionnaire was translated into Malayalam and mailed.

Table 4 - Sub-division-wise and category-wise break-up of the respondents from whom the responses were collected.

Sl. No.	Category	No.of respondents			Total
		Neyyattin-kkara	Adoor	Mavelikkara	
1.	District level				
	a. Principal Agri-cultural Officer (JDA)	1	1	1	3
	b. District SMS	3	3	3	9
2.	Sub-divisional level				
	a. SDAO	1	1	1	3
	b. SMS	4	4	4	12
	c. JAO	10	18	10	38
	d. AD	39	55	50	144
	Total	58	82	69	209

7. Statistical analysis used

A. Analysis of variance

This Test was employed to test whether there is significant difference within the categories of respondents working under T & V system with regard to their perception

of ' Training Methodology and Transfer of Technology' their ' Perception on Job' and 'Performance', Analysis of variance was used for the purpose. Critical difference values were worked out to compare the means for those factors with significant 'F' values.

Again to find out whether there is any significant difference between the various categories with respect to the three sub-divisions as a whole, Analysis of variance technique was used with the assumption that the percentage of scores of each category will be normally distributed.

B. Test of significance of proportions

For the comparison of different categories of respondents within each district the proportion of the scores were calculated and these proportions were tested for significance by making use of the following formula.

$$|\lambda| = \frac{\left| \frac{V_1}{n_1} - \frac{V_2}{n_2} \right|}{\sqrt{PQ\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Where P and Q are estimated as

$$P = \frac{V_1 + V_2}{n_1 + n_2}$$

$$Q = 1 - P$$

Where V_1 = Proportion for the 'Category one' under comparison.

V_2 = Proportion for the 'Category two' under comparison.

P = Combined estimate of population proportion.

Q = 1-P

n_1 = Sample size for 'Category one' under comparison.

n_2 = Sample size for 'Category two' under comparison.

If $|\lambda|$ is $>$ 1.645 we say there is significant difference between the proportions at five per cent level of significance

C. Kruskall-Wallis one way analysis of variance by ranks

This non-parametric statistical test was used to know the significance of difference in the 'Perception of Training Methodology and Transfer of Technology', 'Perception on Job and Performance' amongst the Subject Matter Specialists at district and sub-divisional level whose sample size was small.

The formula used for this purpose is given below.

$$H = \frac{12}{N\ (N+1)} K \frac{(\epsilon R)^2}{n_K} - 3\ (N + 1)$$

N = Total number of observations

K = Number of groups

ϵR = The sum of ranks in each group

The 'H' value calculated was compared with table value at five per cent level of significance.

D. Correlation

Correlation coefficients were worked out to find the relationship of each of the independent variables with the dependent variables. Correlation analysis was also used to find out the inter-relationship between the dependent variables 'Perception on the Job' and 'Performance'. The formula used to compute correlation coefficient was

$$rxy = \frac{Pxy}{\sigma x\ \sigma y}$$

Where rxy = correlation between 'x' and 'y'

pxy = product moment of 'x' and 'y'

σx = standard deviation of the distribution of 'x'

σy = standard deviation of the distribution of 'y'

B. Percentage Analysis

Percentage analysis was carried out in the case of Principal Agricultural Officers (JDA) and Sub Divisional Agricultural Officer groups, whose sample size is very small and where no statistical test is applicable.

RESULTS

CHAPTER IV

RESULTS

In this chapter the results of the study are presented in the following sequence.

A. Comparison of mean scores of the perception on Training Methodology and Transfer of Technology by the T & V personnel of Neyyattinkara, Adoor and Mavelikkara sub-divisions.

B. Proportional scores of perception on Training Methodology and Transfer of Technology by the T & V personnel within Neyyattinkara, Adoor and Mavelikkara sub-divisions compared.

C. Comparison of mean scores of the perception on sub-concepts of Training Methodology and Transfer of Technology by the T & V personnel.

D. Comparison of percentage scores of the perception on sub-concepts of Training Methodology and Transfer of Technology.

E. Proportional scores of perception on sub-concepts of Training Methodology and Transfer of Technology by the T & V personnel within Neyyattinkkara, Adoor and Mavelikkara sub-divisions compared.

F. Category-wise perception of the T & V personnel regarding the sub-concepts of Training Methodology and Transfer of Technology compared.

G. Comparison of mean scores of the T & V personnel on their 'Perception on Job' and 'Performance'.

H. Perception on the Job and Performance by the T & V personnel at sub-divisions level and at district level compared.

I. Intercorrelation between the dependent variables viz., Perception on Job and Performance for different categories of T & V personnel.

J. Relationship between selected personal characteristics of T & V personnel and their perception and performance.

K. Suggestions given by the T & V personnel for the improvement of trainings under T & V system.

A. Comparison of mean scores of the perception on Training Methodology and Transfer of Technology by the T & V personnel of Neyyattinkara, Adoor and Mavelikkara sub-divisions.

A comparison of the perception on Training Methodology and Transfer of Technology among the T & V personnel of Neyyattinkara, Adoor and Mavelikkara sub-divisions was made. The results obtained were presented in the following tables.

Table 5 - Perception of the ADs of Neyyattinkara, Adoor and Mavelikkara sub-divisions on Training Methodology and Transfer of Technology compared

T & V Sub-division	Mean perception score	'F' ratio
Neyyattinkara (N = 39)	208.38	
Adoor (N = 55)	230.94	42.18*
Mavelikkara (N = 50)	242.04	
Pooled mean	228.68	

* Significant at five per cent level of probability.

C.D. for comparing ADs of Neyyattinkara and Adoor = 7.095
C.D. " " Neyyattinkara and Mavelikkara = 7.247
C.D. " " Adoor and Mavelikkara = 6.629

The data presented in the Table 5 revealed that the ADs of the three sub-divisions differed significantly in their perception of Training Methodology and Transfer of Technology being followed under the T & V system. When compared to the pooled mean the ADs of Mavelikkara were having the highest perception (242.04) followed by ADs of Adoor (230.94) and that of Neyyattinkara who had the least perception (208.38).

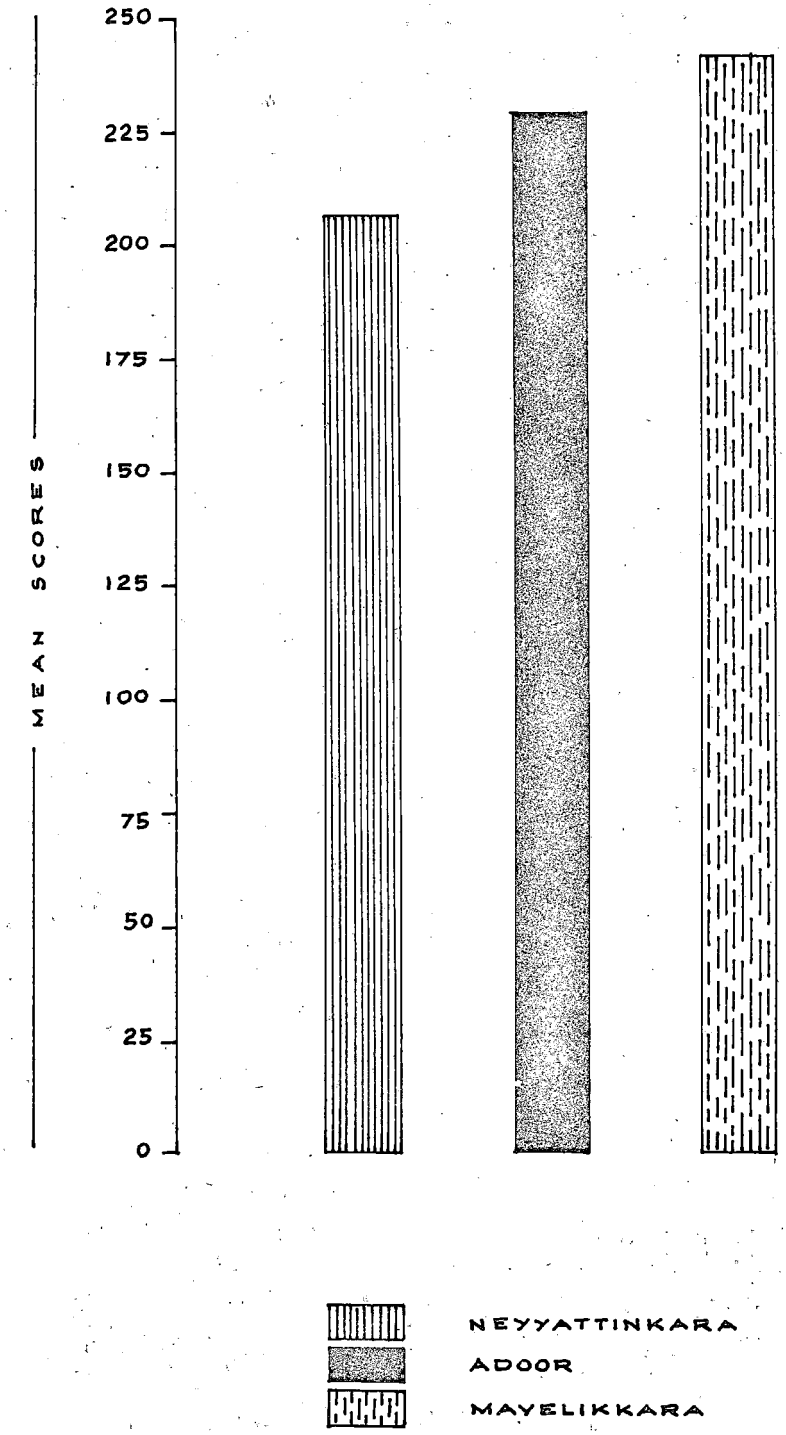
Fig.3 is the graphic presentation of data given in Table 5.

Table 6 - The perception of the JAOs of Neyyattinkara, Adoor and Mavelikkara on Training Methodology and Transfer of Technology compared

T & V sub-division	Mean perception score	'F' ratio
Neyyattinkara (N = 10)	277.91	
Adoor (N = 18)	286.22	1.11 NS
Mavelikkara (N = 10)	281.40	
Pooled mean	282.76	NS - Not significant

No significant difference was found between the JAOs of Neyyattinkara, Adoor and Mavelikkara in their perception regarding Training Methodology and Transfer of Technology.

FIG.3 COMPARISON OF MEAN SCORES OF PERCEPTION OF TRAINING METHODOLOGY AND TRANSFER OF TECHNOLOGY BY THE AGRICULTURAL DEMONSTRATORS OF NEYYATTINKARA, ADOOR AND MAVELIKKARA.



But when compared to pooled mean the JAOs of Adoor sub-division were found to have higher perception than their counterparts in the other two sub-divisions.

Table 7 - The perception of the SMS of Neyyattinkara, Adoor and Mavelikkara on Training Methodology and Transfer of Technology compared

T & V sub-division	Mean perception score	'H' value
Neyyattinkara (N = 4)	301.75	
Adoor (N = 4)	306.75	0.2478 NS
Mavelikkara (N = 4)	305.75	
Pooled mean	304.75	NS - Not significant

The 'H' value presented in the Table 7 revealed no significant difference between the SMS of the three sub-divisions. But the SMS of Adoor sub-division were found to have higher mean perception score (306.75) than the other two groups.

Table 8 - The percentage scores on the perception on Training Methodology and Transfer of Technology between the SDAOs of Neyyattinkara, Adoor and Mavelikkara compared

T & V sub-division	Percentage perception
Neyyattinkara	88.55
Adoor	89.15
Mavelikkara	92.46

As evidenced in the above table the SDAO of Mavelikkara was found to have higher perception (92.46) on Training Methodology and Transfer of Technology, with the SDAOs of Neyyattinkkara and Adoor sub-divisions having a perception which was almost on par.

Table 9 - The perception of the DSMS of Trivandrum, Quilon and Alleppey districts on the Training Methodology and Transfer of Technology compared

District	Mean perception score	'H' value
Trivandrum (N = 3)	309.00	
Quilon (N = 3)	287.66	5.7461*
Alleppey (N = 3)	296.00	
Pooled mean	297.55	

* Significant at five per cent level of probability.

From the table it was found that the SMS of the three districts differed significantly in their perception of Training Methodology and Transfer of Technology. Trivandrum DSMS had higher perception (309.00) when compared to the pooled mean.

Table 10 - The percentage scores on the perception of Training Methodology and Transfer of Technology between the JDAs of Trivandrum, Quilon and Alleppey Districts compared

District	Percentage perception
Trivandrum	93.07
Quilon	93.37
Alleppey	92.77

The percentage scores presented in the above table revealed that the JDAs of Trivandrum and Quilon districts were almost on par in their perception of Training Methodology and Transfer of Technology (93.07) (93.37), whereas the JDA of Alleppey district had the least perception on the same.

B. Proportional scores of perception on Training Methodology and Transfer of Technology by the T & V personnel within Neyyattinkara, Adoor and Mavelikkara sub-divisions compared.

The proportion of scores were tested for significance in order to compare between the various categories of T & V personnel within each sub-division regarding their perception on the concept pertaining to Training Methodology and Transfer of Technology and the results are presented in the following tables.

The Table 11 gives an outlook of the extent of difference existing between various categories of T & V personnel within each sub-division regarding their perception of Training Methodology and Transfer of Technology.

In all the three sub-divisions, ADs were differing significantly in their perception with JAOs, SMS, SDAO of their respective sub-divisions. The latter categories of T & V personnel had the higher proportion of perception than the former category. In all the three sub-divisions JAOs differed significantly with the SMS in their perception regarding Training Methodology and Transfer of Technology. Though the JAOs of Adoor sub-

Table 11 - The proportional scores on the perception of Training Methodology and Transfer of Technology by the T & V personnel of Neyyattinkara, Adoor and Mavelikkara sub-divisions compared

Categories	Neyyattinkara		$\lvert\lambda\rvert$ value	Adoor		$\lvert\lambda\rvert$ value	Mavelikkara		$\lvert\lambda\rvert$ value
	P_1	P_2		P_1	P_2		P_1	P_2	
1. AD -JAO	0.6276	0.8370	23.15*	0.6956	0.8621	26.01*	0.7290	0.8475	4.55*
2. JAO-SMS	0.8370	0.9083	6.46*	0.8621	0.9239	6.24*	0.8475	0.9209	6.85*
3. AD -SMS	0.6276	0.9088	22.49*	0.6956	0.9239	17.83*	0.7290	0.9209	16.00*
4. AD-SDAO	0.6276	0.8855	9.65*	0.6956	0.8915	7.71*	0.7290	0.9246	7.98*
5. JAO-SDAO	0.8370	0.8855	2.32*	0.8621	0.8915	1.56NS	0.8475	0.9246	3.82*
6. SMS-SDAO	0.9088	0.8855	1.30NS	0.9239	0.8915	1.92*	0.9209	0.9246	0.23NS

* Significant at five per cent level of probability

NS - Not significant.

division had no significant difference in their perception with the SDAO of their sub-division, both in Neyyattinkara and Mavelikkara they differed significantly, with the SDAOs having higher proportion of perception than the JAOs. Both in Neyyattinkara and Mavelikkara no significant difference was found between SMS and SDAO on their perception. But in Adoor it was found that there was a significant difference between the SMS and SDAO, with SMS having perceived higher.

It was evident from the table 12 that the SMS of all the three districts had no significant difference in their perception of Training Methodology and Transfer of Technology when compared to the JDAs of respective districts, whereas the SDAO of Neyyattinkara (Trivandrum), Adoor (Quilon) differed significantly with the JDAs in their perception. But in Mavelikkara (Alleppey) no significant difference was observed between them. The other interesting finding was that the DSMS of Trivandrum, Quilon and Alleppey districts differed significantly in their perception of Training Methodology and Transfer of Technology with that of the JDAs and sub-divisional SMS. The JDAs and sub-divisional

Table 12 - The proportional scores on the perception of Training Methodology and Transfer of Technology by the T & V personnel of Trivandrum, Quilon and Alleppey districts compared

Categories	Trivandrum P_1	Trivandrum P_2	$\lvert\lambda\rvert$ Value	Quilon P_1	Quilon P_2	$\lvert\lambda\rvert$ value	Alleppey P_1	Alleppey P_2	$\lvert\lambda\rvert$ Value
SMS - JDA	0.9088	0.9307	1.28 NS	0.9239	0.9337	0.62 NS	0.9209	0.9036	1.03 NS
SDAO- JDA	0.8855	0.9307	2.02*	0.8915	0.9337	1.94*	0.9246	0.9036	0.97 NS
DSMS- JDA	0.8665	0.9307	2.85*	0.8915	0.9337	2.24*	0.8674	0.9036	1.74*
SMS - DSMS	0.9088	0.8665	3.30*	0.9239	0.8915	2.76*	0.9209	0.8674	4.32*
SDAO-DSMS	0.8855	0.8665	0.91 NS	0.8915	0.8915	0.00 NS	0.9246	0.8674	2.73*

NS - Not significant. * Significant at five per cent level of probability

SMS had higher perception than the DSMS of all the three districts under study. The DSMS of Trivandrum and Quilon districts had shown no significant difference in their perception with the SDAOs of Neyyattinkara (Trivandrum) and Adoor (Quilon) sub-divisions. DSMS in Alleppey district difference significantly with the SDAO of Mavelikkara, who had higher perception than the DSMS.

Table 13 - The perception of the T & V personnel regarding Training Methodology and Transfer of Technology compared

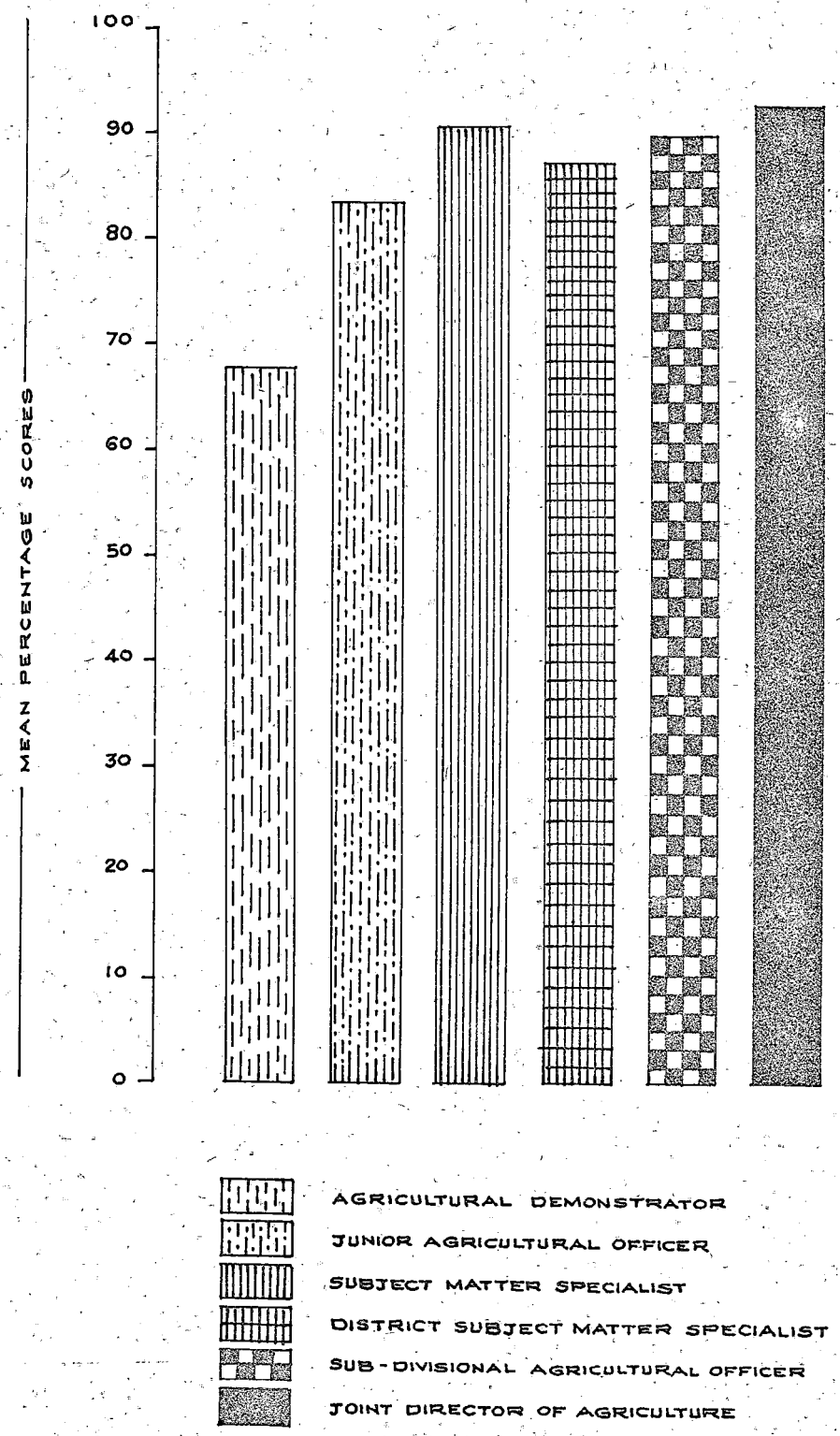
Sl. No.	Categories	Mean percentage score	'F' ratio
1.	AD	68.41	
2.	JAO	84.88	
3.	SMS	91.78	39.19*
4.	SDAO	90.05	
5.	DSMS	87.51	
6.	JDA	92.44	

* Significant at five per cent level of probability

CD = 2.0314

There was a significant difference regarding perception among all the six categories of T & V personnel compared. As evidenced in the table the ADs had the least perception (68.41) of Training Methodology and Transfer of Technology

FIG.4 COMPARISON OF MEAN PERCENTAGE SCORES OF THE PERCEPTION ON TRAINING METHODOLOGY AND TRANSFER OF TECHNOLOGY BY THE T&V PERSONNEL.



when compared to the rest of the categories. The JDAs had the higher perception (92.44) closely followed by SMS (91.78). The SMS were found to have higher perception than the JAOs, SDAOs and District SMS.

The Fig. 4 is the graphic presentation of the data given in Table 13.

C. Comparison of mean scores of the perception on sub-concepts of Training Methodology and Transfer of Technology by the T & V personnel.

A comparative analysis was made among the various categories of respondents and the results obtained were presented in the following tables.

From the table 14 it was found that the ADs of Neyyattinkara, Adoor and Mavelikkara differed significantly in perception regarding all the sub-concepts of Training Methodology except in the perception on Follow-up and feedback.

By comparing the pooled mean the following observations were made.

1. The ADs of Mavelikkara sub-division had the highest perception of Training objective (65.31) closely followed by the ADs of Adoor sub-division (61.72) with the ADs of Neyyattinkara having the lowest perception.

Table 14 - The perception of ADs of Neyyattinkara, Adoor and Mavelikkara sub-divisions regarding the sub-concepts of Training Methodology and Transfer of Technology compared

Sub-concepts	Mean perception scores			Pooled mean	'F' ratio
	Neyyattinkara (N=39)	Adoor (N=55)	Mavelikkara (N=50)		
I. Training Methodology					
a. Training objective	55.87	61.72	65.31	61.38	24.08*
b. Training content	80.35	92.45	91.32	88.78	21.01*
c. Treatment	8.38	11.18	12.36	10.83	15.11*
d. Participation	7.58	8.91	10.00	8.93	19.60*
e. Follow-up and feedback	13.53	13.01	13.74	13.40	0.92 NS
II. Transfer of Technology					
a. Knowledge of Subject matter	16.05	16.41	18.44	17.01	11.14*
b. Communication skill	18.07	19.51	22.20	20.05	14.16*
c. Exercise design	6.76	7.21	8.61	7.57	8.19

NS - Not significant

* Significant at five per cent level of probability.

Table 15- CD at five per cent level for comparison between Agricultural Demonstrators of Neyyattinkara, Adoor and Mavelikkara regarding perception of sub-concepts of Training Methodology and Transfer of Technology

Concepts	Neyyattinkara - Adoor.	Adoor-Mavelikkara	Neyyattinkara - Mavelikkara
I. Training Methodology			
a. Training objective	2.61	2.44	2.66
b. Training content	3.91	3.65	3.99
c. Treatment	1.41	1.94	1.43
d. Participation	0.73	1.02	0.75
II. Transfer of Technology			
a. Knowledge of subject matter	1.09	1.02	1.11
b. Communication skill	1.54	1.43	1.57
c. Exercise design	0.93	0.87	0.95

2. With regard to Training content the ADs of Adoor perceived higher (92.45) followed by ADs of Mavelikkara (91.32).

3. The ADs of Mavelikkara were found to have better perception of Treatment of training programmes (12.36) to that of Adoor (11.18) and Neyyattinkara (8.38)ADs.

4. The ADs of Mavelikkara perceived the sub-concept Participation very highly (10.00) to that of the ADs of other two sub-divisions.

5. In the case of Follow-up and feedback also the ADs of Mavelikkara found to had higher perception.

From the above observations, it was clear that the ADs of Mavelikkara sub-division had better perception of Training Methodology adopted for the trainings under T & V system, followed by ADs of Adoor. The ADs of Neyyattinkara had the least perception of Training Methodology.

With regard to the second main concept, Transfer of Technology, it was observed that the ADs of all the three sub-divisions differed significantly in their perception. The mean perception scores when compared to pooled

mean in this regard revealed that the ADs of Mavelikkara had perceived the importance of Knowledge of subject matter (18.44), Communication skill (22.20), Exercise design (8.61) higher, closely followed by the ADs of Adoor.

In the perception of Transfer of Technology also, it was found that ADs of Mavelikkara had higher perception than the ADs of Adoor and Neyyattinkara sub-divisions.

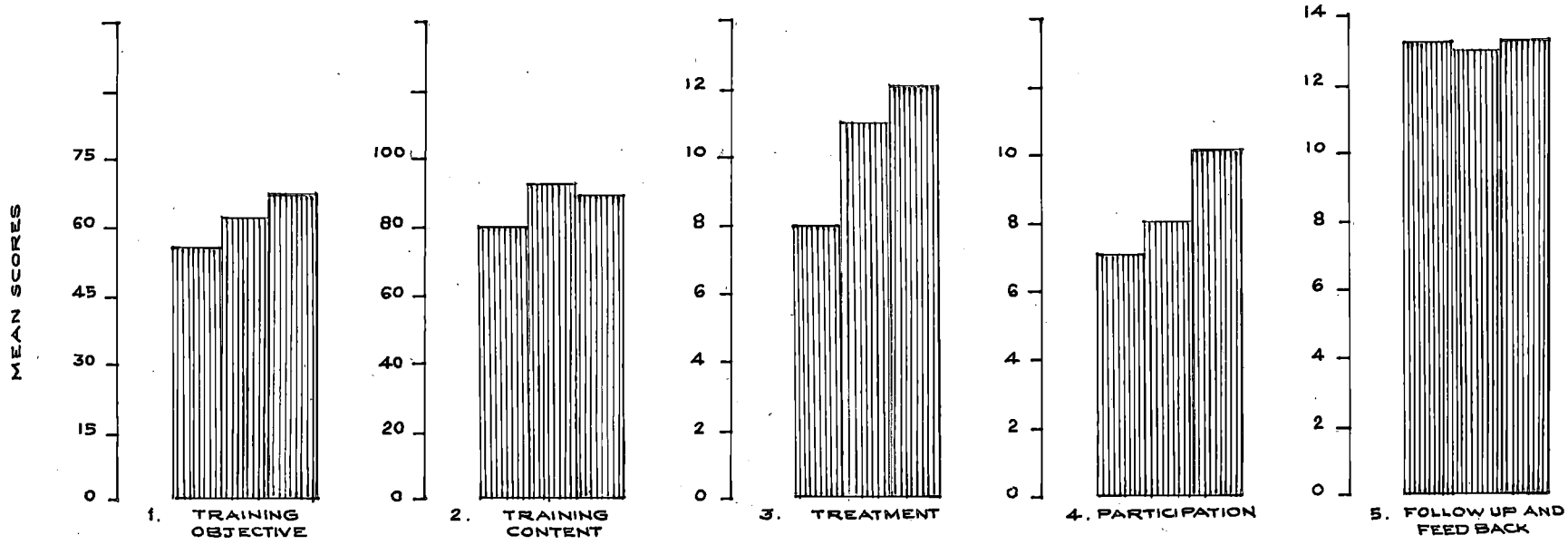
The Fig. 5 is the graphic representation of data given in Table 14.

The Table 16 evidenced a significant difference between the JAOs of the three sub-divisions in the perception of Training objective, Training content, Participation and Follow-up and feedback. No significant difference was observed in the perception of 'Treatment' of training programmes between the JAOs of the three sub-divisions.

The comparisons made with pooled mean revealed that the JAOs of Mavelikkara had higher perception of Training object (78.80) very closely followed by JAOs of Neyyattinkara sub-division (77.10).

FIG. 5 COMPARISON OF MEAN SCORES ON THE PERCEPTION OF SUB-CONCEPTS OF TRAINING METHODOLOGY AND TRANSFER OF TECHNOLOGY BY AGRICULTURAL DEMONSTRATORS OF NEYYATTINKARA, ADOOR AND MAVELIKKARA.

A. TRAINING METHODOLOGY.



B. TRANSFER OF TECHNOLOGY.

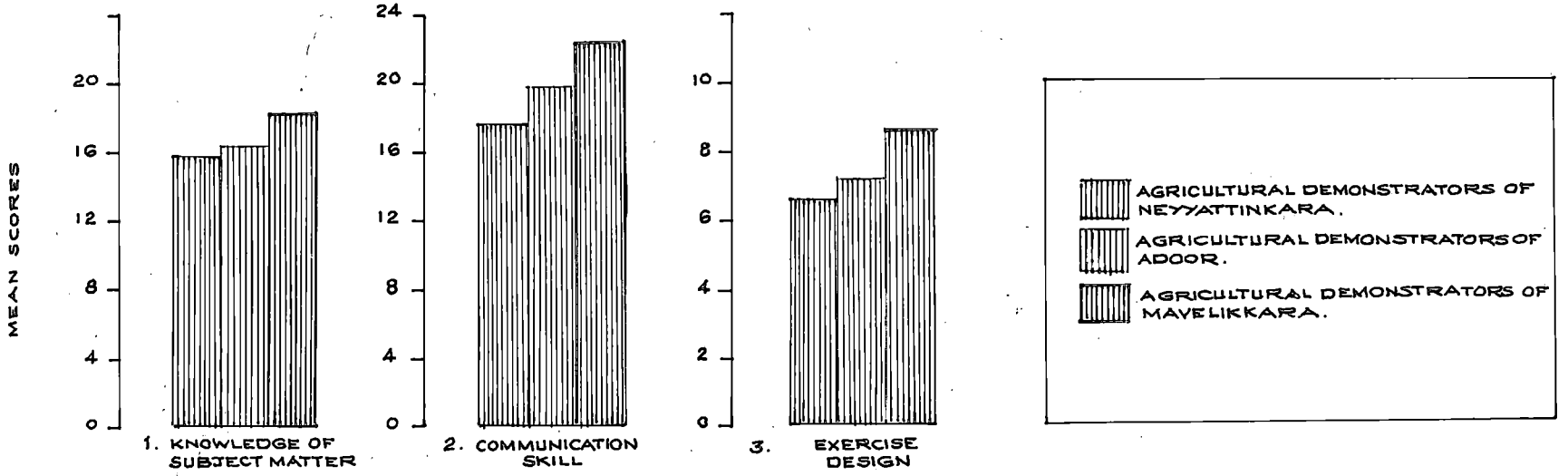


Table 16 - The perception of JAOs of Neyyattinkara, Adoor and Mavelikkara sub-divisions regarding the sub-concepts of Training Methodology and Transfer of Technology compared

Sub-concept	Mean perception scores			Pooled mean	'F' ratio
	Neyyattinkara (N = 10)	Adoor (N=18)	Mavelikkara (N=10)		
I. Training Methodology					
a. Training objective	77.12	69.52	78.80	73.94	24.55*
b. Training content	112.41	117.83	106.90	113.53	4.08*
c. Treatment	14.00	13.50	13.60	13.65	0.35 NS
d. Participation	7.00	10.11	9.71	9.18	15.59*
e. Follow-up and feedback	14.90	17.94	16.50	16.44	10.83*
II. Transfer of Technology					
a. Knowledge of subject matter	16.62	21.83	21.41	20.34	9.16*
b. Communication skill	25.51	26.05	25.81	25.84	0.03 NS
c. Exercise design	9.80	10.00	9.80	9.89	0.06 NS

* Significant at five per cent level of probability

NS - Not significant.

Table 17 - C.D at five per cent level for comparison between JAOs of Neyyattinkara, Adoor and Mavelikkara regarding perception of sub-concepts of Training Methodology and Transfer of Technology

Concepts	Neyyattin-kara - Adoor	Adoor - Mavelikkara	Neyyattin-kara - Mavelikkara
I. Training Methodology			
a. Training objective	2.58	2.58	2.93
b. Training content	7.85	7.85	8.90
c. Participation	1.16	1.16	1.31
d. Follow-up and feedback	2.13	2.13	2.41
II. Transfer of Technology			
a. Knowledge of subject matter	2.58	2.58	2.93
b. Communication skill			
c. Exercise design			

The JAOs of Adoor sub-division were found to had better perception of Training content (117.83) to that of Neyyattinkara and Mavelikkara sub-divisional JAOs.

In the case of perception of Participation, the JAOs of Adoor had perceived higher (10.11) with the JAOs of Neyyattinkara having the least perception (7.0).

With regard to Follow-up and feedback the JAOs Adoor obtained significantly higher score than the JAOs of Neyyattinkara.

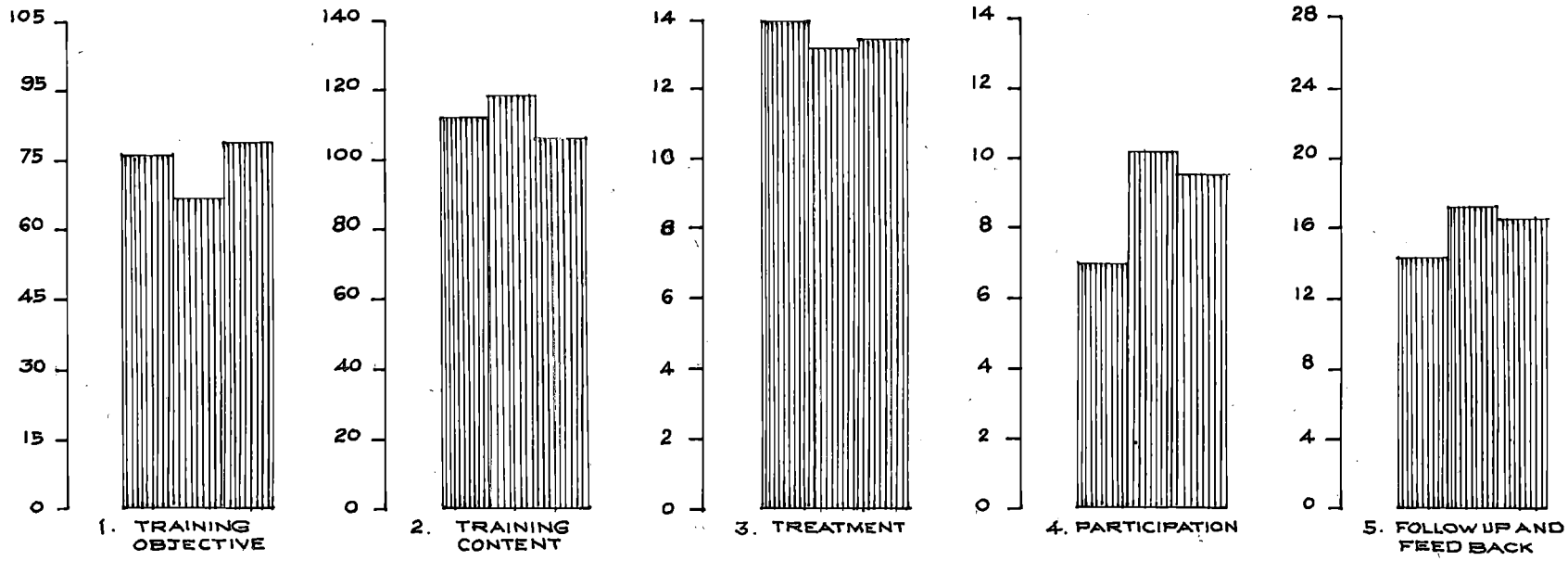
With regard to perception of Transfer of Technology, only in the perception scores of Knowledge of subject matter, the JAOs differed significantly whereas no significant difference was observed in the perception of Communication skill and Exercise design.

It was observed from the table that the JAOs of Adoor had better perception of Knowledge of subject matter (21.83) when compared to the their counterparts in Neyyattinkara and Mavelikkara sub-divisions.

The Fig.6 is the graphic presentation of data given in Table 16.

FIG.6 COMPARISON OF MEAN SCORES OF JUNIOR AGRICULTURAL OFFICERS OF NEYYATTINKARA, ADOOR AND MAVELIKKARA ON THE PERCEPTION OF SUB-CONCEPTS OF TRAINING METHODOLOGY AND TRANSFER OF TECHNOLOGY.

A. TRAINING METHODOLOGY.



B. TRANSFER OF TECHNOLOGY.

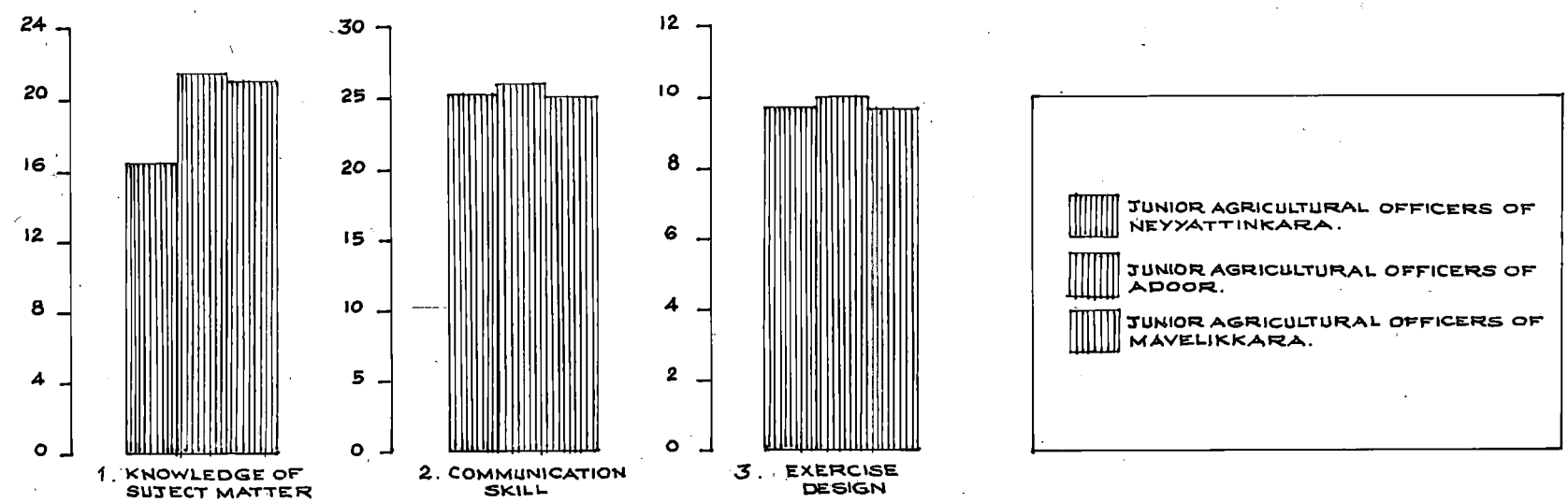


Table 18 - The perception of SMS of Neyyattinkara, Adoor and Mavelikkara sub-divisions regarding the sub-concepts of Training Methodology and Transfer of Technology compared

Sub concept	Mean perception scores			Pooled mean	'H' Value	
	Neyyattinkara (N= 4)	Adoor (N= 4)	Mavelikkara (N= 4)			
I. Training Methodology						
a. Training objective	78.25	79.25	78.75	78.75	0.3445	NS
b. Training content	123.50	125.50	124.25	124.41	0.0261	NS
c. Treatment	14.00	15.50	14.00	14.50	4.6054	NS
d. Participation	8.25	7.50	8.52	7.33	1.7075	NS
e. Follow-up and feeback	17.75	16.75	17.50	17.73	1.5081	NS
II. Transfer of Technology						
a. Knowledge of subject matter	21.25	21.75	22.00	21.66	1.5081	NS
b. Communication skill	28.75	30.00	30.00	29.58	0.3965	NS
c. Exercise design	10.75	10.50	10.75	10.66	2.8140	NS

NS - Not significant.

The 'H' values presented in Table 18 revealed no significant difference among the SMS of the three sub-divisions regarding perception of the sub-concepts of Training Methodology and Transfer of Technology. But the mean perception scores presented in the table revealed that the SMS of both Adoor and Mavelikkara had higher perception than the SMS of the Neyyattinkara sub-division in all the sub-concepts except in the case of Participation, Follow-up and feedback and Exercise design where they were found to had perceived higher than the SMS of Adoor.

The Table 19 revealed significant difference among the DSMS of the three districts only in the perception of Training objective, whereas no significant difference was found among the DSMS in their perception on the other sub-concepts of Training Methodology and Transfer of Technology.

When compared to the pooled mean it was observed that the Quilon DSMS had higher perception (75.33) of Training objective than the other two groups.

Except in the perception of Training content the DSMS of Quilon district had higher perception in all the sub-concepts of Training Methodology and Transfer of Technology than the other two groups.

Table 19 - The perception of DSMS of Trivandrum, Quilon and Alleppey districts regarding the sub-concepts of Training Methodology and Transfer of Technology compared

Sub-concept	Mean perception scores			Pooled mean	'H' value
	Trivandrum (N = 3)	Quilon (N=3)	Alleppey (N=3)		
I. Training Methodology					
a. Training objective	73.66	75.33	72.00	73.66	6.1903*
b. Training content	122.66	122.33	124.00	123.00	NS 0.5924
c. Treatment	14.33	14.33	14.33	14.33	NS 0.1925
d. Participation	8.00	8.66	7.00	7.88	NS 3.4805
e. Follow-up and feeback	17.33	17.66	17.00	17.33	NS 0.1924
II. Transfer of Technology					
a. Knowledge of subject matter	20.00	21.33	20.00	20.44	NS 2.3919
b. Communication skill	27.66	26.33	25.66	26.55	NS 2.4801
c. Exercise design	10.00	10.00	7.66	9.22	NS 2.8140

* Significant at five per cent level of probability

NS - Not significant.

D. Comparison of percentage scores of the perception on sub-concepts of Training Methodology and Transfer of Technology

Percentage analysis was carried out for the JDAs of the three districts and SDAOs of the three sub-divisions whose sample size is very small. The results obtained were presented in the following tables.

The percentage analysis in the Table 20 showed that, with regard to the perception of sub-concepts of Training Methodology the JDA of Quilon district had higher perception of Training objective (95.23), Training content (95.45), Treatment (100.00).

It was also observed that the JDA of Trivandrum district had perceived higher, the sub-concept Participation (75.00), whereas the Quilon and Alleppey districts JDAs had the least perception (66.66).

The perception of Follow-up and feedback was found to be better in JDA of Trivandrum district (95.00).

With regard to Transfer of Technology it was observed that the JDAs of Quilon and Alleppey districts had higher perception of Knowledge of subject matter (95.83).

Table 20 - The perception of JDAs of Trivandrum, Quilon and Alleppey districts regarding the sub-concepts of Training Methodology and Transfer of Technology compared

Sub-concept	Percentage perception		
	Trivandrum	Quilon	Alleppey
I. Training Methodology			
a. Training objective	94.04	95.23	92.85
b. Training content	93.93	95.95	94.69
c. Treatment	93.75	100.00	87.50
d. Participation	75.00	66.66	66.66
e. Follow-up and feedback	95.00	90.00	90.00
II. Transfer of Technology			
a. Knowledge of subject matter	87.52	95.83	95.83
b. Communication skill	93.75	90.62	93.75
c. Exercise design	100.00	83.33	100.00

With respect to perception of Communication skill it was observed that the JDAs of Trivandrum and Alleppey districts were on par (93.75), whereas the JDA of Quilon had the lowest perception.

In the perception of Exercise design also the JDAs of Trivandrum and Alleppey districts had shown higher perception (100.00) than that of the JDA of Quilon district.

Table 21 - The perception of SDAOs of Neyyattinkara, Adoor and Mavelikkara sub-divisions regarding the sub-concepts of Training Methodology and Transfer of Technology compared

Sub-concept	Percentage perception		
	Neyyattinkara	Adoor	Mavelikkara
I. Training Methodology			
a. Training objective	90.47	91.66	92.85
b. Training content	91.66	90.90	93.93
c. Treatment	93.75	93.75	81.25
d. Participation	75.00	75.00	75.00
e. Follow-up and feedback	75.00	85.00	95.00
II. Transfer of Technology			
a. Knowledge of subject matter	79.16	83.33	87.50
b. Communication skill	93.75	90.62	90.62
c. Exercise design	75.00	83.33	91.66

It was observed from the table 21 that the percentage of perception was higher in the SDAO of Mavelikkara with regard to Training objective (92.85), Training content (93.93) and Follow-up and feedback (95.00).

Regarding the perception of Treatment of the training programmes the SDAOs of both Neyyattinkara and Adoor had the same level of perception (93.75) whereas in Mavelikkara SDAO the percentage perception was comparatively low.

With regard to perception of 'Participation' all the three respondents in the three sub-divisions were found to have the same opinion (75.00).

In the perception of Follow-up and feedback a wide variation was observed between the three SDAOs. The Mavelikkara SDAO had the highest perception (95.00) followed by Adoor SDAO (85.00). The SDAO of Neyyattinkara had the least perception (75.00).

The percentage analysis made with regard to sub-concepts of Transfer of Technology revealed that the SDAO of Mavelikkara had higher perception of Knowledge of subject matter (87.50) to that of the other two SDAOs.

The SDAO of Neyyattinkara was found to be better in the perception of Communication skill (93.75) than his counterparts in the other two sub-divisions.

In the case of perception of Exercise design, wide variation was observed between the three respondents. The Neyyattinkara SDAO had the least perception (75.00) and the SDAO of Mavelikkara sub-division had the highest perception (91.66), with the SDAO of Adoor in between three two (83.33)

E. Proportional scores on perception of sub-concepts of Training Methodology and Transfer of Technology by the T & V personnel within Neyyattinkara, Adoor and Mavelikkara sub-divisions compared.

A comparison of the perception of sub-concepts of Training Methodology and Transfer of Technology by the T & V personnel within the three sub-divisions was carried out and the results are presented in the following tables.

It was found from the table 22 that the ADs in all the three sub-divisions differed significantly in their perception regarding Training objectives with SDAO, SMS and JAOs of their sub-divisions, with the latter categories of respondents had perceived the sub-concept higher than the ADs.

Table 22 - The perception of T & V personnel within the Neyyattinkara, Adoor and Mavelikkara sub-divisions regarding the Training objective compared

T & V categories	Neyyattinkara (Trivandrum) P_1	Neyyattinkara (Trivandrum) P_2	$\lvert\lambda\rvert$ Value	Adoor (Quilon) P_1	Adoor (Quilon) P_2	$\lvert\lambda\rvert$ Value	Mavelikkara (Alleppey) P_1	Mavelikkara (Alleppey) P_2	$\lvert\lambda\rvert$ Value
a. Sub-divisional level									
1. AD - JAO	0.6651	0.9178	15.04*	0.7348	0.8273	7.64*	0.7773	0.9380	11.23*
2. JAO- SMS	0.9178	0.9315	0.81 NS	0.8273	0.9434	5.47*	0.9380	0.9375	0.03 NS
3. AD - SMS	0.6651	0.9315	10.21*	0.7348	0.9434	8.66*	0.7773	0.9375	7.05*
4. AD - SDAO	0.6651	0.9047	4.27*	0.7348	0.9166	3.76*	0.7773	0.2986	12.50*
5. JAO- SDAO	0.9178	0.9047	0.45 NS	0.8273	0.9166	2.14*	0.9380	0.9286	0.71 NS
6. SMS- SDAO	0.9315	0.9047	0.84 NS	0.9434	0.9166	0.91 NS	0.9375	0.9286	0.15 NS
b. District level									
1. SMS- DSMS	0.9315	0.8769	2.30*	0.9434	0.8968	1.14 NS	0.9375	0.8571	3.29*
2. SMS- JDA	0.9315	0.9404	0.93 NS	0.9434	0.9523	0.32 NS	0.9375	0.9285	0.15 NS
3. SDAO-JDA	0.9047	0.9404	0.87 NS	0.9166	0.9523	0.94 NS	0.9285	0.9285	0.00 NS
4. SDAO-DSMS	0.9047	0.8769	0.69 NS	0.9166	0.8968	0.53 NS	0.9285	0.8571	1.72*
5. DSMS-JDA	0.8769	0.9404	1.65*	0.8968	0.9523	1.55 NS	0.8571	0.9285	1.72*

* Significant at five per cent level ofprobability

NS - Not significant.

The JAOs of Adoor sub-division were found to have a significant difference in their perception on Training objective with their sub-divisional SMS. Whereas in Neyyattinkara and Mavelikkara no significant difference was found between them. Against in Adoor sub-division it was found that the JAOs had the low perception than their SDAO and whereas no significant difference was observed between these two groups in Neyyattinkara and Mavelikkara sub-divisions.

In all the three sub-divisions the SMS and SDAOs had no significant difference in their perception regarding training objectives.

At the district level comparison it was observed that the sub-divisional SMS of Neyyattinkara and Mavelikkara differed significantly with the DSMS of their respective districts. The SMS had the higher perception than their DSMS in these two districts. No significant difference was found between these two categories in the Quilon district.

In all the three districts it was evidenced from the table that SMS had not differed significantly with their JDAs. Similarly in the case of SDAOs of all the three sub-divisions the same result was observed.

The SDAOs of Neyyattinkara and Adoor sub-divisions had shown no significant difference in their perception of Training objectives with their DSMS, whereas the SDAO of Mavelikkara was found to have higher perception than their DSMS.

The JDA and DSMS of both Quilon and Alleppey district had significant difference in their perception whereas in Trivandrum district no significant difference was observed between them.

From the Table 23 it was evidenced that all the T & V personnel at sub-divisional level except SMS with SDAO, differed significantly in their perception regarding the training content. The SMS of the three sub-divisions had no significant difference with SDAOs in their perception of Training content.

The results compared at District level between the T & V personnel, who were the main participants of monthly workshop revealed no significant difference between them in their perception of Training content in any of the districts.

Table 23 - The perception of the T&V personnel within the Neyyattinkara (Trivandrum), Adoor (Quilon) and Mavelikkara (Alleppey) sub-divisions regarding the 'Training content compared.

T & V categories	Neyyattinkara (Trivandrum)		$\lvert\lambda\rvert$ value	Adoor (Quilon)		$\lvert\lambda\rvert$ value	Mavelikkara (Alleppey)		$\lvert\lambda\rvert$ value
	P_1	P_2		P_1	P_2		P_1	P_2	
a. Sub-divisional level									
1. AD - JAO	0.6087	0.8515	18.11*	0.7004	0.8926	19.81*	0.6918	0.8093	9.21*
2. JAO - SMS	0.8515	0.9356	5.09*	0.8926	0.9507	2.45*	0.8098	0.9412	1.84*
3. AD - SMS	0.6087	0.9356	12.67*	0.7004	0.9507	8.57*	0.6918	0.9412	12.65*
4. AD - SDAO	0.6087	0.9166	7.26*	0.7004	0.9393	6.04*	0.6918	0.9090	5.38*
5. JAO - SDAO	0.8515	0.9166	2.06 NS	0.8926	0.9393	1.72 NS	0.8098	0.9090	2.85 NS
6. SMS - SDAO	0.9356	0.9166	0.05	0.9507	0.9393	0.53	0.9412	0.9090	1.35
b. District level									
1. SMS - DSMS	0.9356	0.9292	0.39 NS	0.9567	0.9267	1.54 NS	0.9412	0.9393	0.12 NS
2. SMS - JDA	0.9356	0.9393	0.16 NS	0.9507	0.9545	0.18 NS	0.9412	0.9469	0.25 NS
3. SDAO- JDA	0.9166	0.9393	0.72 NS	0.9393	0.9545	0.55 NS	0.9090	0.9469	1.19 NS
4. SDAO- DSMS	0.9166	0.9292	0.48 NS	0.9393	0.9267	0.49 NS	0.9090	0.9393	1.21 NS
5. DSMS-JDA	0.9292	0.9393	0.40	0.9267	0.9545	1.12	0.9393	0.9469	0.32

* Significant at five per cent level of probability NS - Not significant.

From the table 24 it was observed that at the sub-divisional level the ADs differed significantly with JAOs and SMS of their sub-divisions. It was found that the JAOs and SMS had higher perception of Treatment to that of ADs in all the three sub-divisions.

In Neyyattinkara and Mavelikkara the ADs had shown significant difference in perception of the Treatment with their SDAOs who had higher perception. But in Adoor sub-sivision no significant difference was observed between the ADs and the SDAO.

In all the three sub-divisions the JAOs had shown no significant difference in the perception of treatment with their sub-divisional SMS. With the SDAOs of Neyyattinkara and Adoor the JAOs of these sub-divisions had not differed significantly in their perception, where as in Mavelikkara sub-division significant difference was evidenced between the SDAOs and JAO, with the SDAO having higher perception.

The SMS of all the three sub-divisions found to have no significant difference with SDAOs of their sub-divisions with regard to perception of Treatment of training programmes.

Table 24 - The perception of T&V personnel within the Neyyattinkkara (Trivandrum) Adoor (Quilon) and Mavelikkara (Alleppey) sub-divisions regarding the 'Treatment' of the Training programmes compared

Categories	Neyyattinkara (Trivandrum) P_1	Neyyattinkara (Trivandrum) P_2	$\lvert\lambda\rvert$ value	Adoor (Quilon) P_1	Adoor (Quilon) P_2	$\lvert\lambda\rvert$ value	Mavelikkara (Alleppey) P_1	Mavelikkara (Alleppey) P_2	$\lvert\lambda\rvert$ value
a. Sub-divisional level									
1. AD - JAO	0.5240	0.8750	2.55*	0.6988	0.8437	4.89*	0.7725	0.8500	2.19*
2. JAO - SMS	0.8750	0.8750	0.00NS	0.8437	0.9687	1.63NS	0.8500	0.8750	0.48NS
3. AD - SMS	0.5240	0.8750	5.38*	0.6988	0.9687	4.64*	0.7725	0.8750	1.91*
4. AD - SDAO	0.5240	0.9375	3.27*	0.6988	0.8750	1.52NS	0.7725	1.0000	2.17*
5. JAO- SDAO	0.8750	0.9375	0.73NS	0.8437	0.8750	0.10NS	0.8500	1.0000	1.66NS
6. SMS - SDAO	0.8750	0.9375	0.70NS	0.9687	0.8750	1.53NS	0.8750	1.0000	1.49NS
b. District level									
1. SMS - DSMS	0.8750	0.8958	0.32NS	0.9687	0.8958	1.58NS	0.8750	0.8958	0.34NS
2. SMS - JDA	0.8750	0.9375	0.70NS	0.9687	1.0000	0.71NS	0.8750	0.8750	0.00NS
3. SDAO -JDA	0.9375	0.9375	0.00NS	0.8750	1.0000	1.46NS	1.0000	0.8750	0.78NS
4. SDAO - DSMS	0.9375	0.8958	0.15NS	0.8750	0.8958	0.23NS	1.0000	0.8958	1.34NS
5.DSMS - JDA	0.8958	0.9375	0.15	0.8958	1.0000	1.34	0.8958	0.8750	0.23

* Significant at five per cent level of probability NS - Not significant

The comparisons made between the participants of monthly workshop at district level revealed no significant difference in their perception of treatment of training programmes in any of the districts.

An examination of the data in Table 25 reveals that the ADs of Adoor sub-division differed significantly in their perception with JAOs of the same sub-division, who found to have higher proportion of perception. But in Neyyattinkara sub-divisions no significant difference was observed between these two groups.

As evidenced in the table the JAOs had no significant difference with their SMS in the perception of participation in Neyyattinkara and Mavelikkara sub-divisions where as in Adoor sub-division significant difference was observed between the JAOs and SMS in their perception.

The ADS of Adoor and Mavelikkara sub-divisions had shown significant difference with the SMS in the perception of participation. Interestingly in these two sub-divisions the ADs had higher proportion of perception than their SMS. But in Neyyattinkara sub-division no difference was observed between these two categories. ADs differed significantly with their SDAO only in Neyyattinkara sub-division in their

Table 25 - The perception of T & V personnel within the Neyyattinkara (Trivandrum) Adoor (Quilon), and Mavelikkara (Alleppey) sub-divisions regarding the 'Participation' compared.

Categories	Neyyattinkara (Trivandrum)		|λ| value	Adoor (Quilon)		|λ| value	Mavelikkara (Alleppey)		|λ| value
	P_1	P_2		P_1	P_2		P_1	P_2	
I. Sub-divisional level									
1. AD - JAO	0.6324	0.5833	0.99 NS	0.7424	0.8425	3.03 *	0.8333	0.8083	0.66 NS
2. JAO - SMS	0.5833	0.6875	1.25 NS	0.8425	0.6250	3.43 *	0.8083	0.7083	1.22 NS
3. AD - SMS	0.6324	0.6875	0.75 NS	0.7424	0.6250	1.78 *	0.8333	0.7083	2.19 *
4. AD - SDAO	0.6324	0.7500	5.93 *	0.7424	0.7500	0.05 NS	0.8333	0.7500	0.76 NS
5. JAO - SDAO	0.5833	0.7500	1.12 NS	0.8425	0.7500	0.84 NS	0.8083	0.7500	0.48 NS
6. SMS - SDAO	0.6875	0.7500	2.86 *	0.6250	0.7500	2.52 *	0.7083	0.7500	0.28 NS
II. District level									
1. SMS - DSMS	0.6875	0.6666	0.20 NS	0.6250	0.7222	0.93 NS	0.7083	0.5833	1.19 NS
2. SMS - JDA	0.6875	0.7500	0.42 NS	0.6250	0.6666	0.26 NS	0.7083	0.7500	0.28 NS
3. SDAO - JDA	0.7500	0.7500	0.00 NS	0.7500	0.6666	0.44 NS	0.7500	0.7500	0.00 NS
4. SDAO - DSMS	0.7500	0.6666	0.54 NS	0.7500	0.7222	0.75 NS	0.7500	0.6666	0.54 NS
5. DSMS - JDA	0.6666	0.7500	0.54 NS	0.6666	0.7222	0.36 NS	0.6666	0.7500	0.54 NS

* Significant at 5% level of probability

NS - Not significant.

perception. Where as in Adoor and Mavelikkara sub-divisions no such difference was observed between these two groups.

The JAOs of all the three sub-divisions had shown no significant difference in their perception of participation with the SDAOs of their sub-division.

The SMS of Neyyattinkara and Adoor sub-divisions differed significantly in their perception with the SDAOs, where as no significant difference was evidenced between these two groups in Mavelikkara sub-division.

The results of the district level comparison of the T&V personnel revealed no significant difference between any two of the categories in the perception on participation in any of the districts.

The comparisons made at sub-divisional level in Table 26 revealed that the ADs in all the three sub-divisions differed significantly with the JAOs and SMS in the perception of 'Follow-up and feedback'. It was found from the table that the JAOs and SMS had higher perception than the ADs in all the three sub-divisions.

In Neyyattinkara sub-division, it was observed that the SMS had higher perception than the JAOs who differed

Table 26 - The perception of T & V personnel within the Neyyattinkara (Trivandrum), Adoor (Quilon) and Mavelikkara (Alleppey) dusb-divisions regarding 'Follow-up and feedback' compared

Categories	Neyyattinkara (Trivandrum)		|λ| Value	Adoor (Quilon)		|λ| Value	Mavelikkara (Alleppey)		|λ| Value
	P_1	P_2		P_1	P_2		P_1	P_2	
I. Sub-divisional level									
1. AD - JAO	0.6769	0.7750	2.72*	0.6509	0.8972	9.08*	0.6870	0.8250	3.94*
2. JAO- SMS	0.7750	0.8875	2.15*	0.8972	0.8375	1.52NS	0.8250	0.8750	1.03NS
3. AD - SMS	0.6769	0.8875	3.95*	0.6509	0.8375	3.41*	0.6870	0.8750	3.54*
4. AD- SDAO	0.6769	0.7500	0.69NS	0.6509	0.8500	1.85*	0.6870	0.9500	2.52*
5. JAO- SDAO	0.7750	0.7500	0.25NS	0.8972	0.8500	0.66NS	0.8250	0.9500	1.44NS
6. SMS- SDAO	0.8875	0.7500	1.58NS	0.8375	0.8500	0.13NS	0.8750	0.9500	0.95NS
II. District level									
1. SMS - DSMS	0.8875	0.8666	0.37NS	0.8375	0.8333	0.76NS	0.8750	0.8500	0.42NS
2. SMS - JDA	0.8875	0.9500	0.83NS	0.8375	0.9000	0.70NS	0.8750	0.9000	0.30NS
3. SDAO- JDA	0.7500	0.9500	1.77*	0.8500	0.9000	0.47NS	0.9500	0.9000	0.60 NS
4. SDAO- DSMS	0.7500	0.8666	1.22NS	0.8500	0.8833	0.39NS	0.9500	0.8500	1.17 NS
5. DSMS- JDA	0.8666	0.9500	1.02NS	0.8833	0.9000	0.20NS	0.8500	0.9000	0.56NS

* Significant at five per cent level of probability NS - Not significant.

significantly with the SMS. But no significant difference was observed between these two categories in Adoor and Mavelikkara sub-divisions.

No significant difference was evidenced between the ADs and SDAO of Neyyattinkara in their perception. But in Adoor and Mavelikkara there was a significant difference between these two groups with the SDAO having higher perception of 'Follow-up and feedback'.

No significant difference was observed between JAOs and SDAO of all the three sub-divisions in their perception. Similar observation was revealed between SMS and SDAO of the three sub-divisions.

The comparisons made at sub-divisional level revealed that in all the three sub-divisions ADs had lower perception than their higher officials ie. JAO, SMS and SDAO.

The comparisons made at district level revealed that the T&V personnel of all the three districts had notdiffered significantly in their perception of 'Follow-up and feedback' except in Trivandrum district where the SDAO of Neyyattinkara differed significantly with his JDA in the perception of the same sub-concept.

The findings of the Table 27 were presented below.

1. At sub-divisional level, the ADs differed significantly with the JAOs in Adoor and Mavelikkara sub-divisions, with the JAOs having perceived the sub-concept higher. But in Neyattinkara no significant difference was observed between them.

2. ADs has shown significant difference with the SMS in all the three sub-divisions with the SMS having perceived higher than the ADs.

3. SDAOs had shown no significant difference with the ADs and SMS in all the three sub-divisions regarding the perception of Knowledge of subject matter.

4. JAOs differed significantly with SMS only in Neyyattinkara sub-division. It was found that the SMS had perceived higher than the the JAOs.

The comparisons made at district level revealed no significant difference among the respondents, except in Mavelikkara sub-division where significant difference

Table 27 - The perception of T & V personnel within the Neyyattinkara (Trivandrum), Adoor (Quilon) and Mavelikkara (Alleppey) sub-divisions regarding the 'Knowledge of subject matter' compared

Categories	Neyyattinkara (Trivandrum)		|λ| value	Adoor (Quilon)		|λ| value	Mavelikkara (Alleppey)		|λ| value
	P_1	P_2		P_1	P_2		P_1	P_2	
I. Sub-divisional level									
1. AD- JAO	0.6688	0.6916	0.67 NS	0.6833	0.9097	0.93*	0.7683	0.8916	4.32*
2. JAO-SMS	0.6916	0.8854	3.71*	0.9097	0.9062	0.10NS	0.8916	0.9166	0.68 NS
3. AD- SMS	0.6688	0.8854	4.38*	0.6833	0.9062	4.61*	0.7683	0.9166	3.38*
4. AD- SDAO	0.6688	0.7916	1.26 NS	0.6833	0.8333	1.57 NS	0.7683	0.8750	1.23 NS
5. JAO-SDAO	0.6916	0.7916	1.02 NS	0.9097	0.8333	1.24 NS	0.8916	0.8750	0.24 NS
6. SMS-SDAO	0.8854	0.7916	1.21 NS	0.9062	0.8333	1.02 NS	0.9166	0.8750	0.63 NS
II. District level									
1. SMS-DSMS	0.8854	0.8333	0.87 NS	0.9062	0.8888	0.28 NS	0.9166	0.8333	1.65*
2. SMS-JDA	0.8854	0.8750	0.14 NS	0.9062	0.9583	0.82 NS	0.9166	0.9583	0.37 NS
3. SDAO-JDA	0.7916	0.8750	0.77 NS	0.8333	0.9583	1.41 NS	0.8750	0.9583	1.04 NS
4. SDAO-DSMS	0.7916	0.8333	0.44 NS	0.8333	0.8888	0.71 NS	0.8750	0.8333	0.48 NS
5. DSMS-JDA	0.8333	0.8750	0.44 NS	0.8888	0.9583	1.01 NS	0.8333	0.9583	1.55 NS

* Significant at five per cent level of probability NS - Not significant.

was observed between SMS and DSMS in the perception of the importance of Knowledge of subject matter.

The findings of the Table 28 were presented below.

1. At the sub-divisional level the comparisons made revealed that the ADs in all the three sub-divisions differed significantly with the JAOs, SMS and SDAOs of their sub-divisions in the perception of Communication skill.

2. No significant difference was found between the JAOs and SDAOs of Adoor and Mavelikkara sub-divisions but there was a significant difference between them in Neyyattinkara sub-division.

3. In all the three sub-divisions no significant difference was observed between SMS and SDAOs in their perception on Communication skill.

The comparison made at district level revealed that the SMS and DSMS of Quilon and Alleppey districts differed significantly in their perception. Where as no significant difference was observed between them in Trivandrum district.

Table 28 - The perception of T&V personnel within the Neyyattinkara (Trivandrum), Adoor (Quilon) and Mavelikkara (Alleppey) sub-divisions regarding the 'Communication skill' compared

Categories	Neyyattinkara (Trivandrum)		|λ| value	Adoor (Quilon)		|λ| value	Mavelikkara (Alleppey)		|λ| value
	P_1	P_2		P_1	P_2		P_1	P_2	
I. Sub-divisional level									
1. AD - JAO	0.5649	0.7968	7.62*	0.6095	0.8107	9.06*	0.6937	0.8062	4.91*
2. JAO- SMS	0.7968	0.8984	2.57*	0.8107	0.9375	3.52*	0.8062	0.9375	3.46*
3. AD - SMS	0.5649	0.8984	10.89*	0.6095	0.9375	7.47*	0.6937	0.9375	5.70*
4. AD - SDAO	0.5649	0.9375	4.21*	0.6095	0.9062	3.42*	0.6937	0.9062	2.59*
5. JAO- SDAO	0.7968	0.9375	1.93*	0.8107	0.9062	1.35 NS	0.8062	0.9062	1.39 NS
6. SMS- SDAO	0.8984	0.9375	0.68NS	0.9375	0.9062	0.62 NS	0.9375	0.9062	0.62 NS
II. District level									
1. SMS-DSMS	0.8984	0.8645	0.79NS	0.9375	0.8229	2.70*	0.9375	0.8020	3.08*
2. SMS-JDA	0.8984	0.9375	0.68NS	0.9375	0.9062	0.62 NS	0.9375	0.9375	0.00 NS
3. SDAO-JDA	0.9375	0.9375	0.00NS	0.9062	0.9062	0.00 NS	0.9062	0.9375	0.46 NS
4. SDAO-DSMS	0.9375	0.8645	1.11NS	0.9062	0.8229	1.12 NS	0.9062	0.8020	1.35 NS
5. DSMS-JDA	0.8645	0.9375	1.11NS	0.8229	0.9062	1.12 NS	0.8020	0.9375	1.79*

* Significant at five per cent level of probability NS - Not significant.

Between SMS - JDA, SDAO - JDA and SDAO -DSMS of all the three districts no significant difference was observed with regard to their perception of Communication skill.

In Alleppey district significant difference was evidenced between DSMS and JDA, where as in Trivandrum and Quilon districts no significant difference was observed between them.

From the Table 29 the following findings were delineated.

1. Significant difference was observed between ADs and JAOs in all the three sub-divisions in the perception of Exercise design.

2. Significant difference was evidenced between the ADs and SMS in all the three sub-divisions. In both the cases, the JAOs and SMS had higher perception of Exercise design than their ADs.

3. No significant difference was revealed between the JAOs and SMS of all the three sub-divisions.

4. SDAOs had shown no significant difference with ADs, JAOs and SMS in all the three sub-divisions with regard to their perception of Exercise design.

Table 29 - The perception of T&V personnel within the Neyyattinkara (Trivandrum), Adoor (Quilon) and Mavelikkara (Alleppey) sub-divisions regarding the sub-concept 'Exercise design' compared.

Categories	Neyyattinkara (Trivandrum)		|λ| value	Adoor (Quilon)		|λ| value	Mavelikkara (Alleppey)		|λ| value
	P_1	P_2		P_1	P_2		P_1	P_2	
I. Sub-divisional level									
1. AD - JAO	0.5641	0.8166	5.68*	0.6015	0.8333	6.24*	0.7166	0.8166	2.27*
2. JAO-SMS	0.8166	0.8958	1.26 NS	0.8333	0.8750	0.71 NS	0.8166	0.8953	1.26 NS
3. AD - SMS	0.5641	0.8958	4.38*	0.6015	0.8750	3.77*	0.7166	0.8958	2.69*
4. AD - SDAO	0.5641	0.7500	1.28 NS	0.6015	0.8333	1.63 NS	0.7166	0.9166	1.52 NS
5. JAO-SDAO	0.8166	0.7500	0.56 NS	0.8333	0.8333	0.00 NS	0.8166	0.9166	0.87 NS
6. SMS-SDAO	0.8958	0.7500	0.94 NS	0.8750	0.8333	0.26 NS	0.8958	0.9166	0.21 NS
II. District level									
1. SMS- DSMS	0.8958	0.8333	0.84 NS	0.8750	0.8333	0.54 NS	0.8958	0.6388	2.34*
2. SMS-JDA	0.8959	1.0000	1.16 NS	0.8750	0.8333	0.38 NS	0.8958	1.0000	1.16 NS
3. SDAO-JDA	0.7500	1.0000	1.85*	0.8333	0.8333	0.00 NS	0.9166	1.0000	1.02 NS
4. SDAO-DSMS	0.7500	0.8333	0.64 NS	0.8333	0.8333	0.00 NS	0.9166	0.6388	3.01*
5. DSMS-JDA	0.8333	1.0000	1.51 NS	0.8333	0.8333	0.00 NS	0.6388	1.0000	2.43*

* Significant at five per cent level of probability NS - Not significant.

The comparisons made at district level evidenced significant difference between SMS - DSMS, SDAO - DSMS, DSMS - JDA in the perception of 'Exercise design' only in Alleppey district. Where as no significant difference was observed between these categories in Trivandrum and Quilon districts.

No significant difference was observed between SMS- JDA, SDAO - JDA in all the three districts.

F. Category-wise perception of the T & V personnel regarding the sub-concepts of Training Methodology and Transfer of Technology compared.

A comparison was made between all the categories of people at sub-divisional level and also between the categories of T & V personnel participating in monthly workshops. This was done with a view to identify, the category which had higher perception of the sub-concepts of Training Methodology and Transfer of Technology. The results of the comparative analysis were presented in the following tables.

Table 30 - The perception of the T & V personnel at sub-divisional level regarding the sub-concepts of Training Methodology and Transfer of Technology compared

Sub-concept	Mean percentage scores				'F' ratio	CD at 5 per cent level
	AD	JAO	SMS	SDAO		
I. Training Methodology						
1. Training objective	72.57	89.44	93.74	91.66	15.55*	3.47
2. Training content	66.69	85.13	94.25	92.16	41.09*	7.82
3. Treatment	66.51	85.62	90.62	76.96	7.62NS	-
4. Participation	73.60	71.47	67.36	75.00	0.47NS	-
5. Follow-up and feedback	67.16	83.24	86.68	85.00	6.58NS	-
II. Transfer of Technology						
1. Knowledge of subject matter	70.68	83.09	90.27	83.33	4.08NS	-
2. Communication skill	62.27	80.57	92.44	91.66	47.68*	2.94
3. Exercise design	62.74	82.21	88.88	83.33	11.58*	4.74

* Significant at five per cent level of probability

NS - Not significant.

The comparative analysis made between the T & V personnel at sub-divisional revealed significant difference between them in the perception of Training objective and Training content under Training Methodology. Significant difference was also observed in the perception of Communication skill and Exercise design under Transfer of Technology between the T & V personnel at sub-divisional level.

When the mean perception scores were compared the SMS had higher perception of Training objective (93.74), Training content (94.25), Treatment (90.62) and Follow-up and feedback (86.68). It was also observed that the SMS had the least perception of participation (67.36) where as the SDAOs had the highest perception (75.00).

The SDAOs were found to be very close to SMS in their perception of Training objective (91.66), Training content (92.16) and Follow-up and feedback (85.00).

From the table it was clear that the ADs had the least perception on the sub-concepts of Training Methodology.

The results of the comparative analysis of the perception of sub-concepts of Transfer of Technology revealed that the SMS had perceived higher to that of the other groups.

No significant difference was observed in the perception of Knowledge of subject matter among all the categories of T & V personnel at sub-divisional level. But the mean perception scores revealed higher perception by the SMS (90.27).

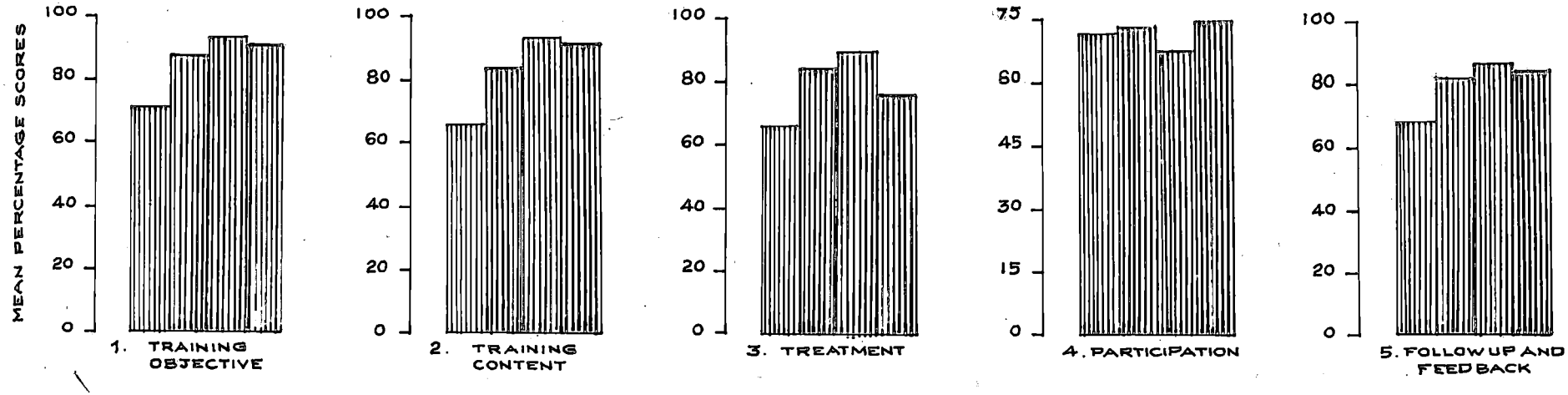
Significant difference was observed in the perception of Communication skill; here also the SMS had higher perception (92.44), closely followed by SDAOs (91.66).

With regard to perception of Exercise design significant difference was observed between the four categories of sub-divisional T & V personnel. The SMS had shown higher perception (88.88) with the SDAOs and JAOs having a perception almost on par.

The analysis of Transfer of Technology at sub-divisional level revealed higher perception by SMS and the lowest perception by ADs. Fig. 7 is the graphic presentation of the data given in Table 30.

FIG.7 COMPARISON OF MEAN PERCENTAGE SCORES ON THE PERCEPTION OF SUB-CONCEPTS OF TRAINING METHODOLOGY AND TRANSFER OF TECHNOLOGY BY THE T&V PERSONNEL AT SUB-DIVISIONAL LEVEL.

A. TRAINING METHODOLOGY.



B. TRANSFER OF TECHNOLOGY.

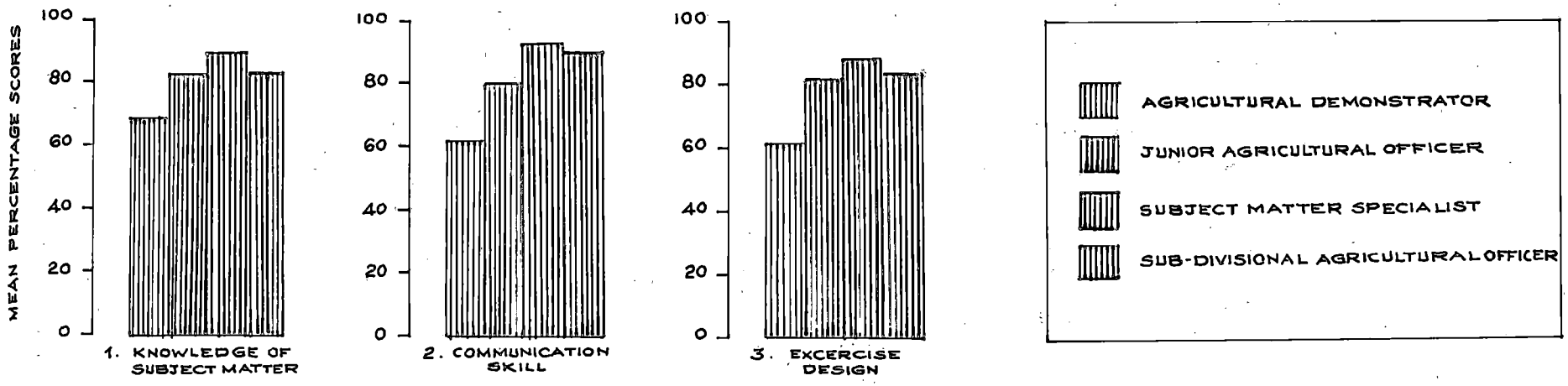


Table 31 - The perception of the T & V personnel at district level regarding the sub-concepts of Training Methodology and Transfer of Technology compared

Sub-concept	Mean percentage scores				'F' ratio	CD at 5 per cent level
	JDA	DSMS	SDAO	SMS		
I. Training Methodology						
1. Training objective	94.04	87.69	91.66	93.74	9.48*	3.81
2. Training content	94.69	93.17	92.16	94.25	3.77NS	-
3. Treatment	93.63	89.58	76.96	90.62	0.47NS	-
4. Participation	69.44	65.73	67.36	75.00	2.15NS	-
5. Follow-up and feedback	91.66	86.66	85.00	86.68	0.84NS	-
II. Transfer of Technology						
1. Knowledge of subject matter	93.05	85.18	85.00	90.27	4.53NS	-
2. Communication skill	92.70	82.98	91.66	92.44	12.03*	1.91
3. Exercise design	94.44	76.84	83.33	88.88	2.35	-

* Significant at five per cent level of probability

NS - Not significant.

Significant difference among the categories under comparison was observed only for the Training objective under Training Methodology and Communication skill under Transfer of Technology. The JDAs were found to have higher perception in all sub-concepts except in the perception of participation where they were found to had lower perception to that of SMS. The JDAs were closely followed by SMS in their perception of the sub-concepts of Training Methodology and Transfer of Technology. The DSMS and SDAOs were found to have perception lower to that of JDAs and SMS.

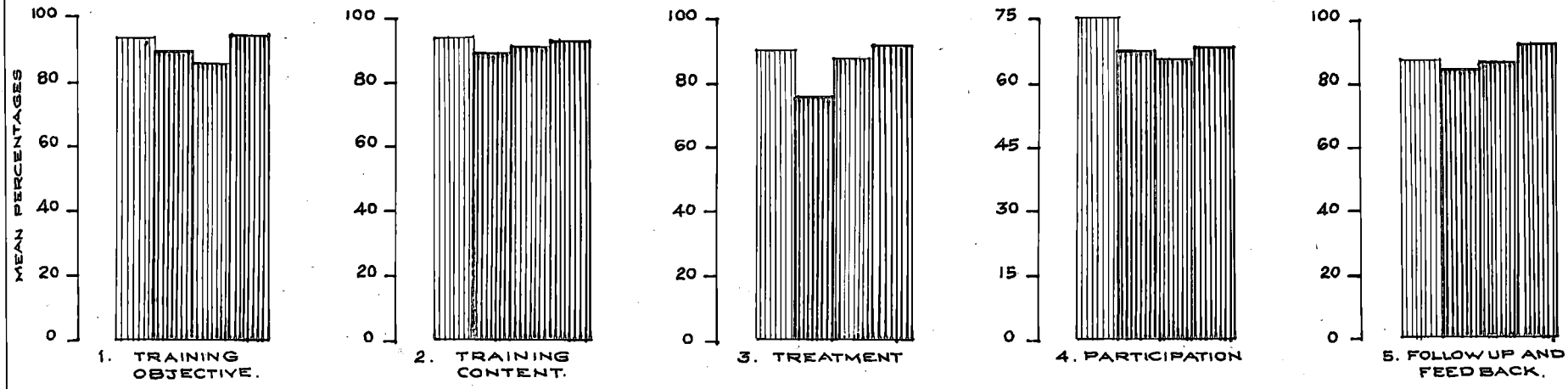
Fig.8 is the graphic representation of the data given in the table 31.

G. Comparison of mean scores of the T & V personnel on their 'perception on Job' and ' Performance'

An analysis was carried out in order to compare the T & V personnel with regard to their perception of Job and Performance by them in the T & V system. The results of the analysis were presented in the following tables.

FIG. 8 COMPARISON OF MEAN PERCENTAGES ON THE PERCEPTION OF SUB-CONCEPTS ON TRAINING METHODOLOGY AND TRANSFER OF TECHNOLOGY OF THE DISTRICT LEVEL T&V PERSONNEL.

A. TRAINING METHODOLOGY.



B. TRANSFER OF TECHNOLOGY.

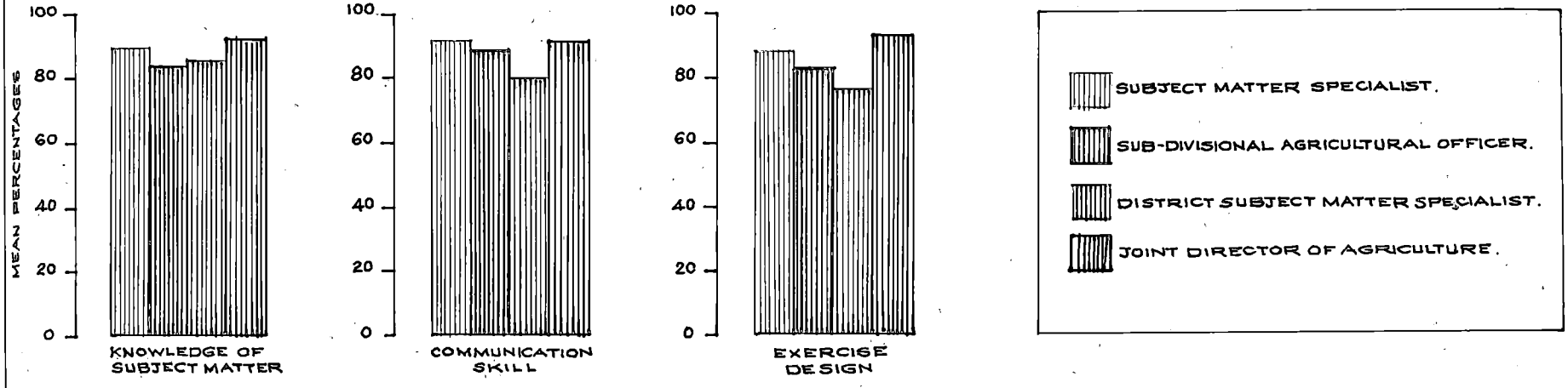


Table 32 - Comparison of mean scores of the ADs of Neyyattinkara, Adoor and Mavelikkara on 'Job perception and Performance'.

Dependent Variables	Mean scores			'F' ratio
	Neyyattin-kara (N= 39)	Adoor (N= 55)	Maveli-kkara (N= 50)	
1. Job perception	59.41	82.03	81.28	138.78
2. Performance	43.71	52.96	52.88	22.23*

Pooled mean for job perception : 76.465
" " " performance : 50.430

* Significant at five per cent level of probability

CD for comparison between ADs of Neyyattinkara and Adoor on Job perception .. 2.92
" " " Adoor and Mavelikkara .. 2.73
" " " Neyyattinkara and Mavelikkara .. 2.98

CD for comparison between ADs of Neyyattinkara and Adoor on performance .. 3.02
" " " Adoor and Mavelikkara .. 2.81
" " " Neyyattinkara and Adoor .. 3.08

It was observed from the table that the ADs of all the three sub-divisions differed significantly in their job perception and also in their performance.

When compared to the pooled mean, the ADs of Adoor sub-division had better perception of their job (82.036), very closely followed by the ADs of Mavelikkara (81.280). The ADs of Neyyattinkara had the least perception about their job in T & V system (59.410).

With respect to performance also it was seen that the ADs of Adoor had shown higher mean performance score (52.963), followed by ADs of Mavelikkara sub-division. As in the previous case here also the ADs of Neyyattinkara had shown least performance mean score.

Fig.9 is the graphic presentation of the data given in Table 32.

Table 33 - Comparison of the mean scores of the JAOs of Neyyattinkara, Adoor and Mavelikkara with regard to their Perception on Job and Performance

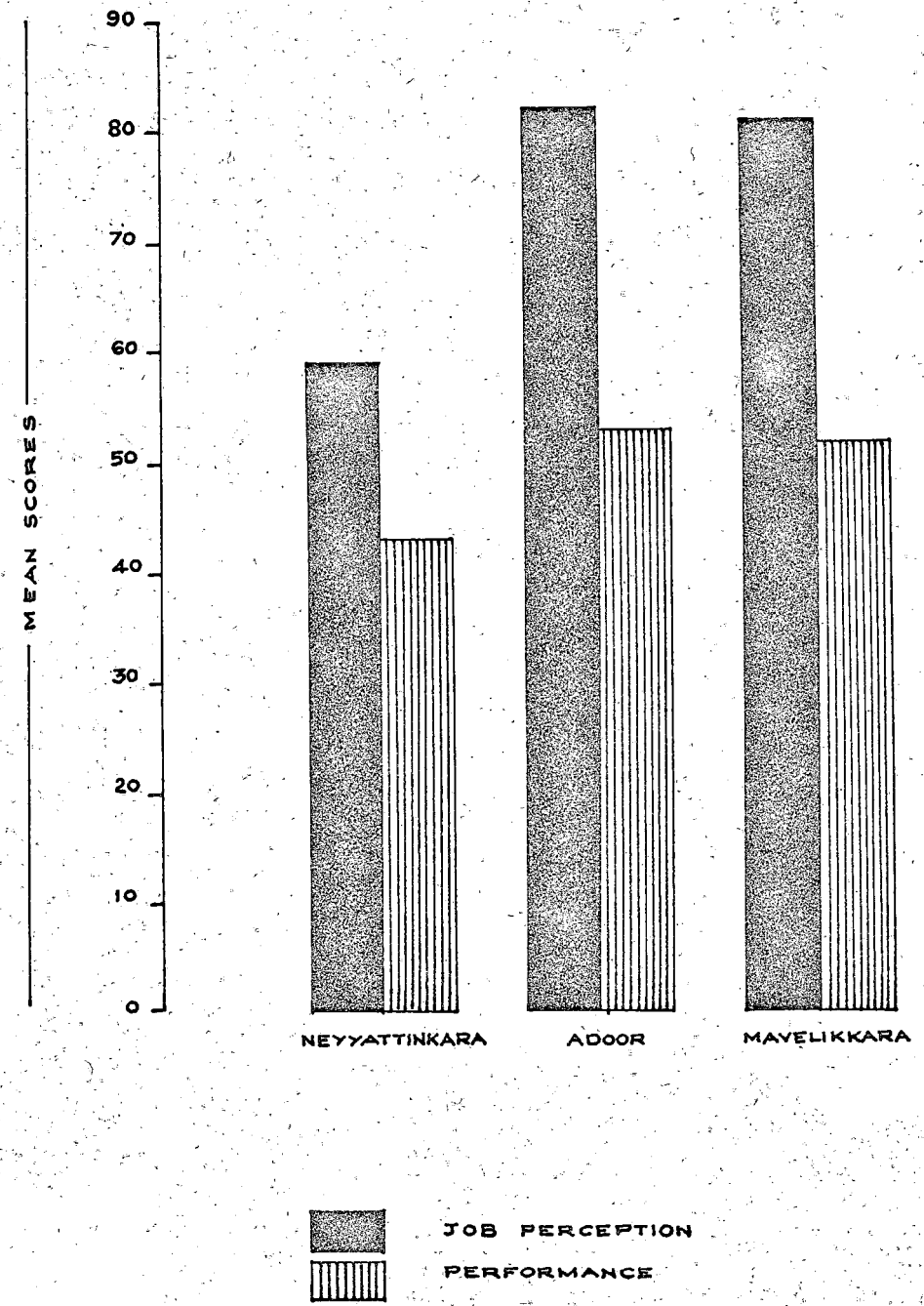
Dependent variables	Mean percentage scores			'F' ratio
	Neyyattin-kara (N=10)	Adoor (N=18)	Maveli-kkara (N= 10)	
1.Job perception	172.60	168.72	168.70	0.49 NS
2.Performance	93.8	105.44	107.70	3.04 NS

Pooled mean for job perception : 169.73

" " Performance : 102.97

NS - Not significant.

FIG. 9 COMPARISON OF MEAN SCORES OF JOB PERCEPTION AND PERFORMANCE OF THE AGRICULTURAL DEMONSTRATORS OF NEYYATTINKARA, ADOOR AND MAVELIKKARA.



The 'F' ratio given in the table indicated no significant difference between the JAOs of Neyyattinkara, Adoor and Mavelikkara with regard to the perception of their job as well as in their performance. But the mean scores of both perception and performance indicated better perception of job by Neyyattinkara JAOs and performance by JAOs of Mavelikkara sub-division.

Table 34 - Comparison of mean scores of the SMS of Neyyattinkara, Adoor and Mavelikkara on Job perception and Performance

Dependent variables	Mean scores			'H' value
	Neyyattin-kara (N=4)	Adoor (N=4)	Mavelikara (N=4)	
1. Job perception	262.75	266.25	261.75	0.76 NS
2. Performance	175.50	179.00	180.25	0.07 NS

Pooled mean for job perception : 263.58
" " performance : 180.25

NS - Not significant.

The Kruskall-wallis 'H' test revealed no significant difference between the SMS of Neyyattinkara, Adoor and Mavelikkara sub-divisions both in their Job perception and Performance in T & Vsystem. Even then the mean perception

scores revealed better perception of job by SMS of Adoor sub-division (266.25) and better performance by SMS of Mavelikkara sub-division (180.25).

Table 35 - Comparison of mean scores of the DSMS of Trivandrum, Quilon and Alleppey on 'Job perception and Performance'.

Dependant variables	Mean scores			'H' value
	Trivandrum	Quilon	Alleppey	
1. Job perception	75.00	76.00	77.33	0.80 NS
2. Performance	51.00	53.66	53.66	0.14 NS

Pooled mean for job perception : 76.11
" " " Performance : 52.77

NS - Not significant

The 'H' values presented in the above table revealed no significant difference between the DSMS of Trivandrum, Quilon and Alleppey regarding their Job perception and Performance. Still the mean perception scores presented in the table showed better Job perception and Performance by DSMS of Alleppey District.

Table 36 - Comparison of percentage scores of the SDAOs of Neyyattinkara, Adoor and Mavelikkara on 'Job perception' and 'Performance'

Dependant variables	Percentage scores		
	Neyyattinkara	Adoor	Mavelikkara
1. Job perception	94.23	96.15	94.23
2. Performance	76.92	88.46	79.48

The percentage scores presented in the table revealed high Job perception (96.15) and higher Performance (88.46) by the SDAO of Adoor. The SDAOs of Mavelikkara and Adoor sub-divisions had the same level of perception regarding their job a in T & V system (94.23). The SDAO of Mavelikkara had better job performance (79.48) than the SDAO of Neyyattinkara.

Table 37 - Comparison of percentage scores of the JDAs of Trivandrum, Quilon and Alleppey districts regarding their 'Job Perception' and 'Performance'

Dependant variables	Percentage scores		
	Trivandrum	Quilon	Alleppey
1. Job perception	83.33	83.33	86.00
2. Performance	77.77	74.07	81.48

The table revealed that the JDA of Alleppey district had better perception of his job (86.00), with his counter parts in the other two districts having the same level of understanding of their job in T & V system.

In performing the jobs also the Alleppey JDA was found to be better (81.48) followed by JDA of Trivandrum (77.77).

H. Perception on the Job and Performance by the T & V personnel at sub-divisional level and at district level compared

An analysis was carried out at sub-divisional leavel and at district level in order to know the category of T & V personnel, who had perceived their jobs better and performed them in a better way. The results of the analysis were presented in the following tables.

Table 38 - Comparison of percentage scores of the T & V personnel at sub-divisional level regarding their 'perception on Job and Performance'

Dependant variable	Mean percentage scores				'F' ratio	CD at 5 per cent level
	AD	JAO	SMS	SDAO		
1. Job perception	63.99	83.33	96.90	94.89	22.51*	4.51
2. Performance	57.30	66.86	87.37	81.62	21.82*	4.15

* Significant at five per cent level of probability

The 'F' ratio values presented in the table revealed significant difference between all the categories of respondents regarding the perception of their job and performance.

The SMS were found to have significantly higher perception of their job (96.90), closely followed by the SDAOs (94.89). It was also observed that the ADs had the least perception of their job in T & V system (63.99).

In performing their job also, the SMS had shown significantly higher performance score (87.37) when compared to the other T & V personnel at sub-divisional level. In this case also the ADs found to be very poor in their performance.

From the table, it was concluded that the T & V personnel at sub-divisional level, superior in their positions to the ADs had better understanding of their job and better performance than the ADs.

Fig. 10 is the graphic presentation of the data given in Table 38.

Table 39 - Comparison of T & V personnel at District level regarding their 'perception on Job and Performance'

Dependant variables	Mean percentage scores				'F' ratio	CD at 5 per cent level
	JDA	DSMS	SDAO	SMS		
1. Job perception	84.22	82.72	94.89	96.90	105.32*	0.99
2. Performance	77.77	76.48	81.62	87.37	5.03NS	-

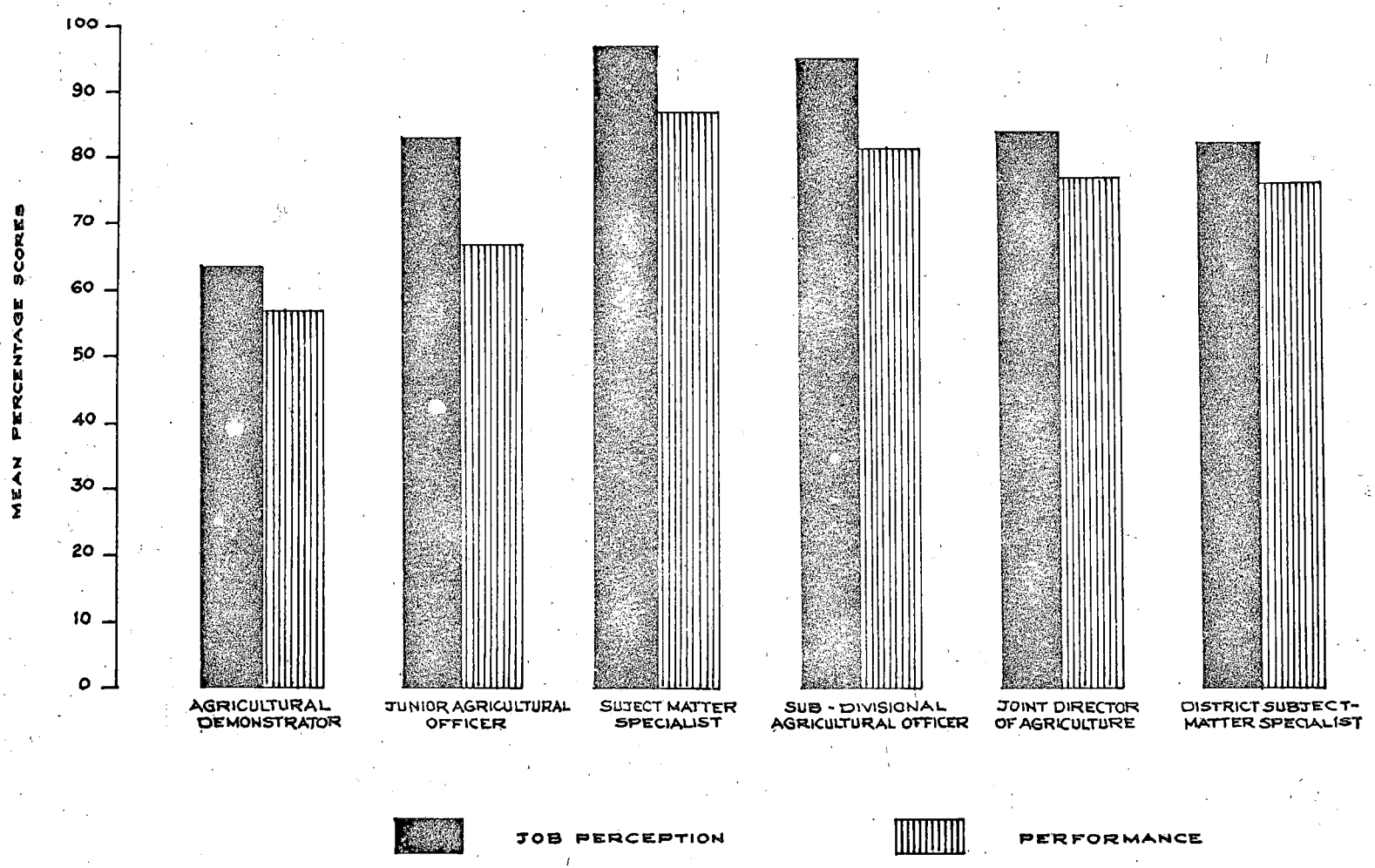
* Significant at five per cent level of probability
NS - Not significant

Here also significant difference was evidenced between the four categories of respondents at district level regarding their level of understanding of their job in T & V system.

It was observed from the table that the SMS had higher perception of their job (96.90) followed by SDAO (94.87). The DSMS were found to be very low in their perception regarding their job (82.72).

No significant difference was observed with regard to performance by the T & V personnel at district level. Even then mean performance scores revealed better performance by SMS (87.37). Here also the DSMS were found to very poor in their performance (76.48) when compared to other categories. The mean percentage scores of the DSMS and JDA were represented in a graphic form in Fig. 10.

FIG.10 COMPARISON OF JOB PERCEPTION AND PERFORMANCE OF T&V PERSONNEL.



I. Inter-correlation between the dependent variables viz. perception on Job and Performance for different categories of T&V personnel

Relationship between perception on Job and Performance was worked out by doing simple correlation. The results of the analysis were presented in the following table.

Table 40 - Intercorrelation between Job perception and performance for various categories of T & V personnel.

Category	'r' value
1. AD	0.6704*
2. JAO	0.5416*
3. SMS	0.8468*
4. DSMS	0.3265 NS

* Significant at five per cent level of probability

NS - Not significant.

The computed 'r' value for all the four categories of respondents revealed that the relationship between Job perception and Performance was positively significant in the case of ADs, JAO and SMS where as in the case of DSMS category though the 'r' value is positive, it was not significant.

J. Relationship between the selected personal characteristics of T & V personnel and their perception and performance

Relationship of the selected personal characteristics of T & V personnel viz, age, education, experience, trainings acquired and job satisfaction with the dependent variables was studied by computing the coefficient of correlation 'r'. The results were presented in the following tables.

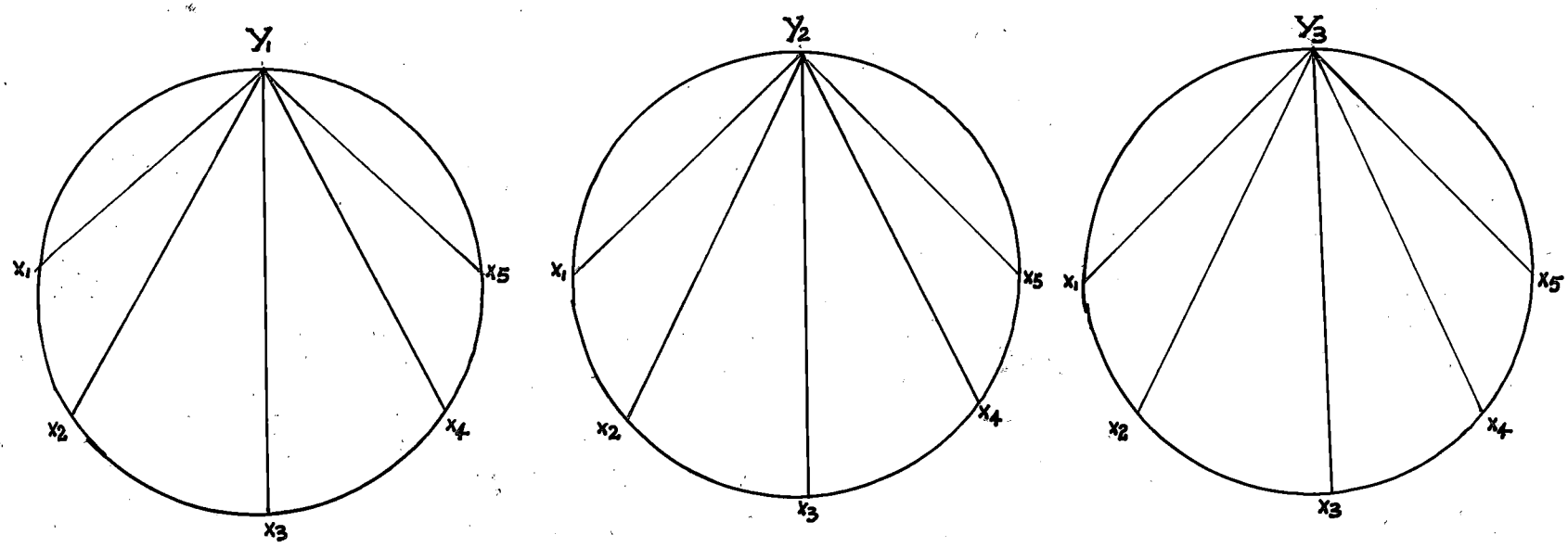
Table 41 - Relationship between perception of Training Methodology and Transfer of Technology and selected personal characteristics of T& V personnel.

Sl. No.	Independent variables	'r' value			
		AD	JAO	SMS	DSMS
1	Age	0.4614*	0.8324*	0.9062*	0.4082 NS
2	Experience	0.5528*	0.9048*	0.9485*	0.3101 NS
3	Education	0.1221NS	-0.3183NS	0.4103 NS	0.5021 NS
4	Trainings acquired	0.2943NS	0.4290*	0.2235 NS	0.1957 NS
5	Job satis-faction	0.5380*	0.2128NS	0.5765*	0.3061 NS

* Significant at five per cent level of probability

NS - Not significant.

FIG. CORRELATION BETWEEN THE DEPENDENT VARIABLES AND THE SELECTED PERSONAL CHARACTERSTICS OF AGRICULTURAL DEMONSTRATORS.



Y_1 - PERCEPTION OF TRAINING METHODOLOGY AND TRANSFER OF TECHNOLOGY

Y_2 - PERCEPTION ON JOB.

Y_3 - PERFORMANCE.

X_1 - AGE X_2 - EXPERIENCE X_3 - EDUCATION

X_4 - TRAININGS ACQUIRED X_5 - JOB SATISFACTION

——— POSITIVELY SIGNIFICANT

An analysis of the Table 41 revealed that the age and experience had significant positive relationship with the perception of ADs, JAOs and SMS where as in DSMS though the relationship is positive, it was not significant. Education had no relationship with the perception of T & V personnel only in the JAO category trainings acquired by them had positive significant relationship with their perception. ADs and SMS Job satisfaction had shown significant positive relationship with their perception.

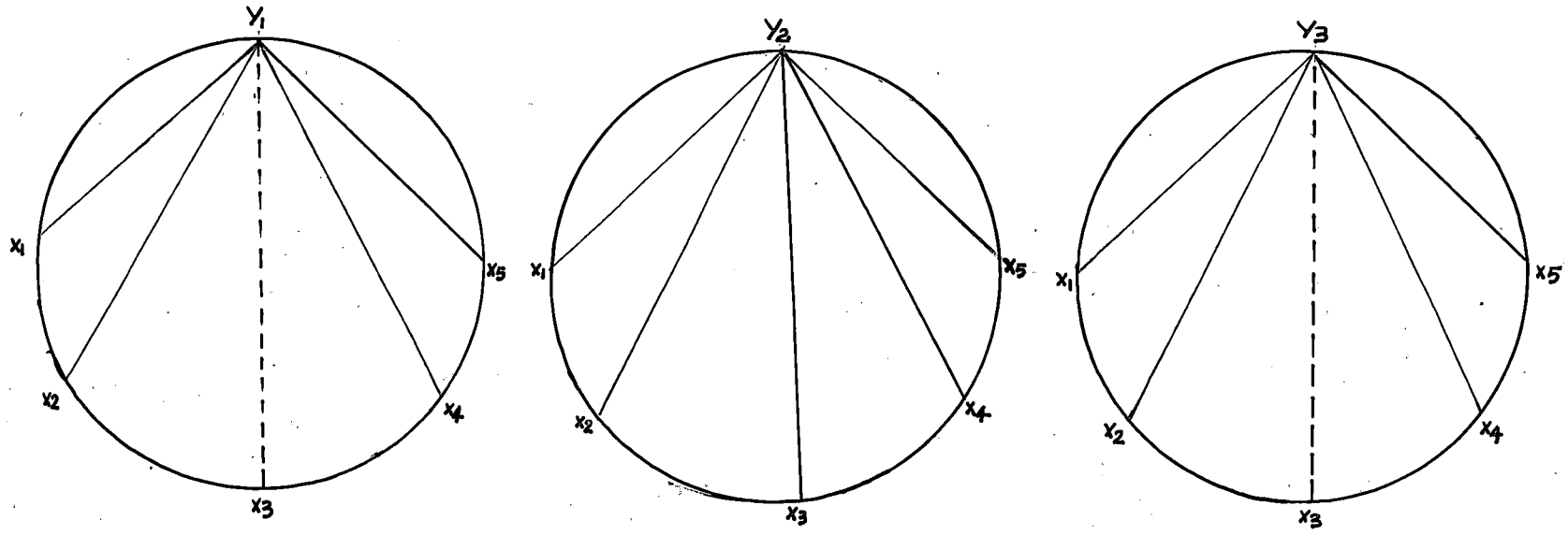
Table 42 - Relationship between Job perception and selected personal characteristics of T & V personnel

S. No.	Independent variables	'r' value			
		AD	JAO	SMS	DSMS
1.	Age	0.3165*	0.3289*	0.7998*	-0.1620 NS
2.	Experience	0.4984*	0.4292*	0.8460*	0.1866 NS
3.	Education	0.1320NS	0.0409NS	0.4133NS	0.0372 NS
4.	Trainings acquired	0.1574NS	0.1051NS	0.3023NS	-0.1723 NS
5.	Job satisfaction	0.5804*	0.7026*	0.4068NS	0.1821 NS

* Significant at five per cent level of probability

NS - Not significant.

FIG. CORRELATION BETWEEN THE DEPENDENT VARIABLES AND THE SELECTED PERSONAL CHARACTERSTICS OF JUNIOR AGRICULTURAL OFFICERS.



Y_1 - PERCEPTION OF TRAINING METHODOLOGY AND TRANSFER OF TECHNOLOGY.
Y_2 - PERCEPTION ON JOB.
Y_3 - PERFORMANCE

X_1 - AGE X_2 - EXPERIENCE X_3 - EDUCATION
X_4 - TRAININGS ACQUIRED X_5 - JOB SATISFACTION

———— POSITIVELY SIGNIFICANT

The table evidenced significant positive relationship between job perception and age and experience of ADs, JAOs and SMS, where as it was found to be not significant in the case of DSMS. Education had no relationship with the job perception of T & V personnel. The trainings acquired by the T & V personnel had shown no significant relationship with their job perception. The job satisfaction of ADs and JAOs had significant positive relationship with their job perception, where as in the case of SMS and DSMS it was found to be non-significant.

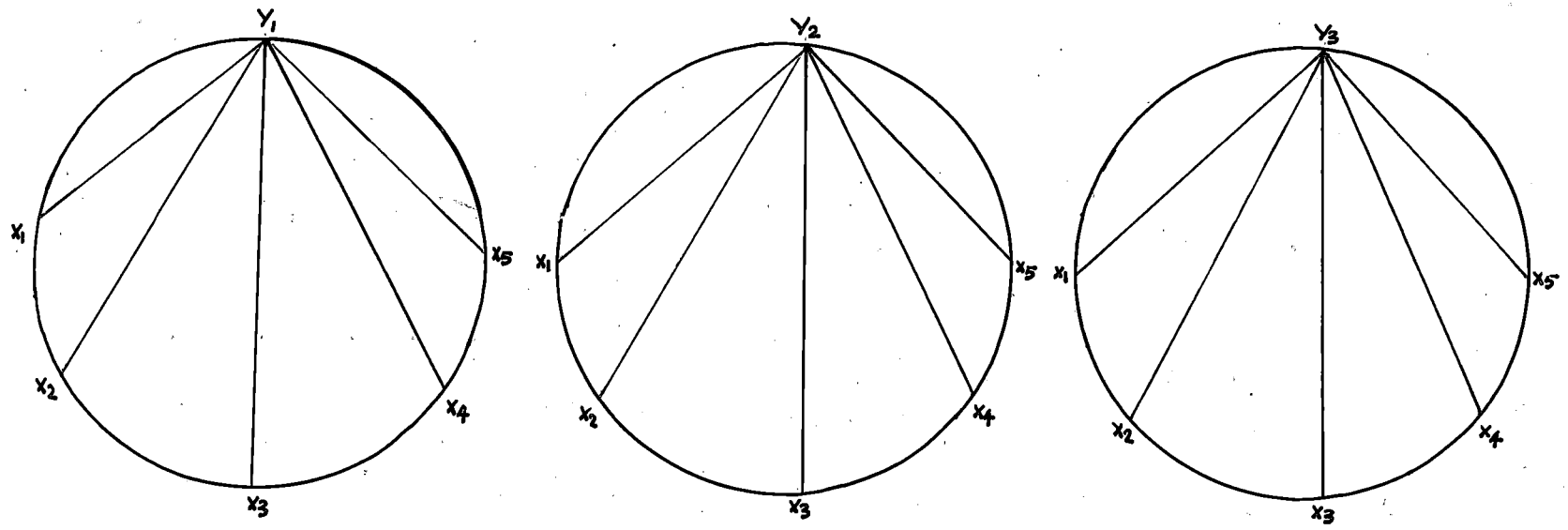
Table 43 - Relationship between performance and selected personal characteristics of T & V personnel

Independent variables	'r' value			
	AD	JAO	SMS	DSMS
1. Age	0.2952*	0.3467*	0.8925*	0.1831 NS
2. Experience	0.4335*	0.3657*	0.9279*	0.2131 NS
3. Education	0.1065NS	0.2495 NS	0.4062NS	0.5384 NS
4. Trainings acquired	0.2561*	0.4424*	0.1764NS	0.1011 NS
5. Job satisfaction	0.6203*	0.2094NS	0.6445*	0.6031 NS

* Significant at five per cent level of probability

NS - Not significant

FIG. CORRELATION BETWEEN THE DEPENDENT VARIABLES AND THE SELECTED PERSONAL CHARACTERSTICS OF SUBJECT MATTER SPECIALISTS.



Y_1 - PERCEPTION OF TRAINING METHODOLOGY AND TRANSFER OF TECHNOLOGY.
Y_2 - PERCEPTION ON JOB.
Y_3 - PERFORMANCE

X_1 - AGE X_2 - EXPERIENCE X_3 - EDUCATION
X_4 - TRAININGS ACQUIRED X_5 - JOB SATISFACTION

——— POSITIVELY SIGNIFICANT

From the table it was observed that all the personal characteristics of DSMS had no significant relationship with their performance. Age and experience of ADs, JAOs and SMS had shown significant positive relationship with their performance. Education of these people had no relationship with their performance. The trainings acquired by ADs and JAOs had shown significant positive relationship with their performance, where as in the case of SMS it was found to be non-significant. ADs and SMS job satisfaction had shown significant positive relationship with their performance. In the case of JAO though the relationship was positive, it was non-significant.

From the data given in Tables numbered 41, 42, 43, the relationship between selected personal characteristics of AD, JAO, SMS and the dependent variables was diagramatically represented in Figs. 11, 12 & 13.

k. Suggestions given by the T & V personnel for the improvement of the trainings under T & V system.

Suggestions had been collected from all the categories of respondents regarding the improvement of training programmes under T & V syste. Based on the frequency about ten suggestions had been isolated and presented in the following table.

Table 44 - Suggestions for the improvement of training programmes under T & V system given by various categories of respondents

Sl.No.	Suggestions	Frequency	Percentage
1.	The trainings should be practical oriented. Much importance should be given to field demonstrations	156	74.64
2.	Presentation of messages through audiovisual aids is a must	129	61.72
3.	A fully equipped training centre is required in each sub-division	125	59.80
4.	Library facilities should be provided in each sub-division	114	54.54
5.	More contribution is needed during trainings from the experts of Agricultural University, Department of Agriculture and ICAR.	109	52.15
6.	A perfect feedback system is badly needed in this system	104	49.41
7.	Field visists should be arranged during training	97	46.41
8.	Guest lectures by experts should also be arranged on topical field problems	94	44.97
9.	Regular visists to the nearby research station should be arranged	84	40.19
10.	The time for both monthly workshops and fortnightly trainings should be increased so that important subject matter aspects can be emphasised and discussed thoroughly	80	38.27

From the table it was evident that majority (74.64 per cent) had suggested the presentation of messages through Audio-visual aids. It was interesting to note that 52.15 per cent of the respondents emphasised the involvement of 'Agricultural University, Department personnel and ICAR'. It was also evident that 59.80 per cent expressed the need of a fully equipped training centre in each such division. 'Guest lectures'and'Field Visits' were also suggested by nearly 46.41 per cent of respondents. A considerable number of respondents 38.27 per cent suggested the increase in time for both types of trainings. Many of them (40.19 per cent) (49.76 per cent) had felt the importance of visits to the research station and operating a perfect feedback system. Respondents (54.54 per cent) suggested 'library facilities' in each sub-divisions in order to up-date their Knowledge of subject matter.

DISCUSSION

CHAPTER - V

DISCUSSION

In this chapter a detailed discussion of the results obtained are presented under the following sections.

I. Perception of Training Methodology and Transfer of Technology by T & V personnel of the three districts under study.

II. Perception on sub-concepts of Training Methodology and Transfer of Technology.

III. Comparison of sub-concept-wise perception of the Training Methodology and Transfer of Technology by the T & V personnel within the three districts under study.

IV. Sub-concept-wise perception of the T & V personnel at the sub-divisional level and at district level.

V. Comparison of the T & V personnel on 'Job perception' and 'Job performance'.

VI. Relationship of personal characteristics of T & V personnel with their perception and performance within the T & V system.

VII. Suggestions for the improvement of training programmes under T & V system.

I. Perception of Training Methodology and Transfer of Technology by T & V personnel of the three districts under study.

On analysis of the perception of the T & V personnel in the three districts namely Trivandrum, Quilon and Alleppey districts, the Table Numbers 5 and 9 depicts significant difference in perception of the concepts builtin within the method of training between the ADs and DSMS. Where as it is interesting to note that the similar perception of the other officials namely JAO, SMS, SDAO and JDA does not differ (Tables 6,7,8 & 10). But at the same time Table 11 evidenced that the ADs perceived the least to that of other categories of T & V personnel in all the three districts. Quite interestingly Table 12 also evidenced the least perception by the DSMS to that of other categories of T & V personnel at district level in all the three districts.

It is observed from the above findings that the ADs who are the lowest level personnel in direct contact with the farmers are having comparatively low perception

on the training side of the T & V system. This may be due to the lack of opportunities, given to the ADs by exposition of the methodology of the training approaches, training contents and the methods of proper communication of the message to the farmers level. Thus the finding implies a demand on the part of the JAOs and the SMS, who are working at the field level with more contact with the ADs to stress on deeper acquisition of the knowledge, skill and techniques of demonstration by the ADs in order to convince farmers better and thus leading to the adoption of the messages by them.

The low perception by the DSMS when compared to the other T & V personnel in all the three districts may be due to the peculiarity of their job which involves only rendering of suggestions and clarifications with regard to the messages to the officials next to them and which ultimately hindering an opportunity for them to involve intensively in the training programmes being conducted both at district level and at sub-divisional level. The higher perception of Training Methodology and Transfer of Technology by the JDAs, SDAOs and SMS may be attributed to the following reasons. As the JDAs and SDAOs are the principal administrators of training programmes

at district level and at sub-divisional level respectively, they have to look into very minor aspect of the trainings conducted at these levels which may be one of the reasons for their higher perception. As the JDAs has to look after the entire district, it is natural for them to be in a higher level of perception than others. As far as SDAOs are concerned, besides looking after their sub-divisions they will be in constant touch with the higher level officials from whom they seek advices every time, keeping themselves in line with the methodology of the trainings conducted under T & V system. With regard to SMS, they are the link between the district level trainings (Monthly workshop) and the sub-divisional level trainings (Fortnightly training programmes), which makes them to be in touch with the top-most official of the T & V hierarchy to the bottom level ADs, ultimately having a thorough understanding of the Methodology of Training and Transfer of Technology.

The District-wise comparison as depicted in Tables 5, 6, 7, 8, 9 and 10. It is seen that significant difference existed between ADs in the three districts and DSMS of the three districts with regard to perception of Training Methodology and Transfer of Technology. But among the ADs, it is

interesting to note that the ADs of Mavelikkara sub-division (Alleppey district) and Adoor sub-division (Quilon district) had higher perception than ADs of Neyyattinkara sub-division (Trivandrum district). Similarly in case of DSMS, the DSMS of the Trivandrum district depicted higher perception to that of their counterparts in Quilon and Alleppey districts.

This finding is being supported by the personal data collected which indicated that majority of the ADs of the both sub-divisions were found to have greater experience, aged and acquired many more trainings than the ADs of Neyyattinkara. This is being reflected in their sincerity in their job and to feel the importance of the training programmes as indicated by their higher perception. This finding has been supported by Austman (1961) who stated age was positively associated with the effective village level workers. Similarly Reddy (1976[a]) reported positive influence of age on the efficiency level of gramsevaks.

The significant difference in perception with regard to DSMS of the three districts, where in those of Trivandrum district ranked highest may be due to being closest to the State headquarters and that the contact with the higher

officials of these categories of personnel with the state level administrators of the T & V system is quite frequent.

Though the findings pertaining to the JAOs and SMS were found to be not significant, amongst them the JAO and SMS of the Adoor sub-division (Quilon district) evidenced highest perception on Training Methodology and Transfer of Technology, as per the Tables 6 and 7 respectively. In this context it is observed that majority of the JAOs of Adoor sub-division (Quilon district) are aged and have received more trainings. Singh and Srivastava (1970) found in their research among extension personnel that training to extension officers in agriculture has been responsible for better understanding of their job. Similarly Kanagasabai and Subramaniam (1975) reported that there was significant association between the number of trainings and efficiency of Deputy Agricultural Officers in Tamil Nadu.

The perception of the JDAs and officers at sub-divisional level were found to be on par (Tables 8 and 10). This may be due to their continued orientation with the T & V administration at both district and state level performances under the T & V system.

Summarising on the perception of the concepts of the Training Methodology and Transfer of Technology, Table 13 depicts that the ADs and JAOs who are working at the field level differed significantly in their perception to that of the T & V personnel at the State level as evidenced by the significant 'F' ratio. The reasons for this has already been assigned to their difference in age, experience and trainings acquired.

II. Perception on sub-concepts of Training Methodology and Transfer of Technology.

Comparing the perception of the T & V personnel working at the field level, namely, the ADs and JAOs it is quite pertinent to notice in Tables 14 and 16, their significant difference in perception on concepts namely Training objective, Training content and Participation during the training programmes. Where as the perception on the treatment of the training programme has been found to be on par amongst the JAOs as against significant difference found among the ADs. Similar was the case amongst the JAOs on the sub-concept of Follow-up and feedback pertaining to the subject matter dealt during the training programmes. Reasoning shall be assigned to the level of education of the ADs as much lower to that of

JAOs who are graduates in agriculture, though not significant enough. The training acquired by the JAOs may also be found to affect their perception. Moe (1960) in support of this finding observed that the most effective extension agents were likely to have graduate training. Similarly Bisen and Dahama (1965) reported that academic qualification affect the role perception and performance of Agricultural Extension Officers.

Referring to the pooled means under the same context, once again it is found that the ADs of Mavelikkara is superior in their perception of the sub-concepts of the training methodology than their counter-parts of Addor and Neyyattinkara. Interestingly the JAOs of Mavelikkara ranks next to that of ADs in the context, where as the JAOs of Adoor were superior to them in perceiving the majority of the sub-concepts of the training methodology under the training programmes of the T & V system. Notably both ADs and JAOs of Neyyattinkara were found to be inferior in perceiving sub-concepts on the training methodology as compared to their counterparts of Adoor and Mavelikkara sub-divisions in terms of their pooled means of their perception scores.

The findings pertaining to the sub-concepts of Transfer of Technology, also evidenced the same result as evidenced in the case of Training Methodology wherein the JAOs of Adoor and Mavelikkara sub-divisions perceived better.

The comparison of the pooled mean scores naturally evidenced comparatively low perception of the T & V personnel of the Neyyattinkara sub-division (Trivandrum district) with regard to the sub-concepts of both Training Methodology and Transfer of Technology.

The above result may be due to the personal data collected pertaining to the personal characteristics which revealed that majority of the ADs and JAOs of Mavelikkara and Adoor who perceived better than their counterparts of Neyyattinkara were of older aged, more trained and better experienced.

Analysing perception of the sub-concepts under Training Methodology by the T & V personnel above the category of JAOs namely SMS, SDAO, DSMS and JDA in their order of hierarchy (Tables 18, 21, 19, 20), the above personnel of the Quilon district evidenced higher degree of perception pertaining to Training objective, Training

content, Treatment and Participation. In the case of Follow-up and feedback the Trivandrum district SMS and the JDA perceived better.

With respect to their varied perception of Transfer of Technology, the SMS and SDAO of the Mavelikkara sub-division (Alleppey district) and the DSMS of the Quilon district had higher perception to that of other district personnel pertaining to their knowledge of subject matter, skill in communication and exercise design, namely pertaining to the efficiency to demonstrate. Interestingly the Communication skill in transfering the technology were perceived high by the SDAO, DSMS and JDA of the Trivandrum district. It is but natural that the personnel of the Trivandrum district were superior in their communication acts since the monthly workshops are being conducted at the Agricultural College, where they acquire better training from highly qualified and experienced teachers in agricultural profession. The T & V personnel of the Quilon district evidenced higher perception as the majority of them are aged, experienced and personnel who have trainings more than that of the personnel of the other two districts. Supporting this Ernest (1970) observed that efficiency of extension workers increased with years

of service. Ramdas and Reddy (1975) also reported that the AEOs with more total service was more favourable towards district level training than AEOs with less total service. Kanagasabai and Subramaniam (1975) revealed that experience is one of the factors in deciding the effectiveness of extension worker.

III. Comparison of sub-concept-wise perception of the Training Methodology and Transfer of Technology by the T & V personnel within the three districts under study.

Discussing on Table 22 depicting the difference in perception of the Training objectives by the T & V personnel at sub-divisional level of the three districts, it is seen that the ADs significantly differ in perceiving the Training objective as compared to the perception of the higher categories of officials in all the three sub-divisions Where as except in the case of Adoor sub-division (Quilon district), the T & V personnel above the category of ADs within each district perceived the Training objective in par. Their low perception of Training objectives may be due to lack of emphasis on Training objectives during the training programmes conducted in Quilon district.

Comparison at the district level revealed significant difference in the perception of the Training objectives between the SMS, DSMS and JDA of both Neyyattinkara and Mavelikkara sub-divisions where as the perception of all the other categories of T & V personnel above the JAO level in Quilon district is in par. Compared at sub-divisional level it is seen that the SMS perceived the Training objectives better than the ADs, JAOs and SDAOs within each sub-division studied. Where as at district level the JDAs of all the three districts perceive the Training objectives better than the SMS, SDAO and DSMS under the T & V system. The reason for such finding can be accrued to the leadership played by the JDAs in conducting the monthly workshop and the SMS conducting the fortnightly training programmes under the T & V system. The findings have been supported by Leagans (1952), who suggested that the extension worker should have a better understanding of extension and its education role. Furthe Aiken (1952) also observed that the most effective agent is one who has a clear concept of objectives for his programme.

With respect to the second sub-concept studied unde Training Methodology, namely, ' Training content' (Table it is interesting to note significantly comparable

difference in perception of the same between the different categories of personnel at sub-divisional level of all the three districts. At the same time the perception on the training content of the monthly and fortnightly workshops were perceived by all the categories of personnel at district level in par. Analysing critically the above findings it is seen that the SMS at sub-divisional level of all the three sub-division, naturally claimed higher perception compared to other T & V personnel within the sub-division. This is being supported by Ramakrishna (1965) regarding Training content and method of training programme, who emphasised that it should be such that it suits the level of intelligence, education and understanding of the trainees and take into account the local needs, problems and the applicability of new techniques to the local situations.

The categorical comparison of the T & V personnel at sub-divisional level in Table 24 with reference to their perception towards 'Treatment' of the two methods of training, namely monthly workshop and fortnightly trainings revealed significant difference in perception between the ADs and the rest of the categories of all the three sub-divisions studied where as at District level

the perception of T & V personnel above the level of JAO pertaining to treatment of the two methods of the trainings were in par.

Though not significant the Table 24 also revealed higher perception on the treatment of the two methods of training by the JDAs followed by SDAOs, DSMS, SMS at the district level comparison in all the three districts. The reason for this is the hierarchial responsibility of conducting both monthly workshops and fortnightly trainings under the T & V system, in all the three districts as treatment refers to the process of handling the training sessions within the monthly workshops and fortnightly trainings. The above findings are being supported by the following review. Sidhu and Patel (1968) who observed that more emphasis should be laid on practical instead of lectures. Sohal and Janaki (1970) also emphasised that more emphasis should be given on practical training. Apart from that Sinha and Verma (1977) also observed that 50 per cent of the trainees were not satisfied with the time allotted to discussion method. The trainees suggested that practical aspects of a subject be given more emphasis than theoretical concepts.

Discussing on 'Participation' of the T & V personnel during trainings at the district and sub-divisional level depicted by Table 25 revealed significant difference between ADs and JAO and the JAOs and SMS of the Quilon district with regard to their perception on the extent and nature of participation in the training programmes of the T & V system where as the perception of the Ads differed significantly with that of SDAO of Neyattinkara sub-division and SMS of the Mavelikkara sub-division with regard to their extent and nature of participation in the training programmes of the T & V system. Evidently it is seen that the SMS and SDAO of Neyyattinkara and Adoor sub-divisions differed significantly in perceiving the same. Interestingly at District level all the levels of T & V personnel when compared, perceived their nature and extent of Participation is par. The significant difference with regard to the extent of Participation between the T & V personnel of Adoor sub-division mainly between AD, JAO and SMS shall be due to topographical and geographical terrain of the region and transporting problems or accessibility to reach and participate effectively in the training programmes in time. The review in this regard is not available.

Referring to the Follow-up and feedback, as an essential sub-concept Table 26 depicted that significant difference exists within all the three sub-divisions between ADs and their higher officials with regard to their perception, on the contrary the T & V personnel at the district level of the three districts perceived these functions in par. Eventually the findings indicate lack of orientation and stress on the importance and utility of follow-up and feedback of the message transmitted to the farming community through training programmes under the T & V system. This might be due to the existence of a separate system for monitoring and evaluation of T & V programmes functioning at the directorate level of the state. The above finding is in concurrent with that of Renukaradhya and Somasundaram (1979) who in their study in Bangalore district reported that the trainees felt that there was no proper follow-up undertaken by the trainers and extension agency.

Interestingly many authors like Schramm (1960) emphasised the importance of feedback in successful communication. Bhatnagar and Dahama (1980) also stated that for effective communication feedback is of paramount importance. An experienced communicator he opined, is

attentive to feedback and constantly modifies his message in the light of what he observes or hears from the audience.

Discussing on the process of Transfer of Technology which involves communication of messages with more skill and expertise on the subject matter to the farmers Table 27 also evidences critically significant differences in perception of the subject matter communicated through the training programmes under the T & V system. At the sub-divisional level the Knowledge on subject matter pertaining to the messages have been perceived low by the ADs in comparison to their senior officers within all the three sub-divisions viz. Neyyattinkara, Adoor and Mavelikkara. Here too as in the previous findings perceptions was in par amongst the SMS and the officers above them. The low perception by ADs might be due to their acquisition of trainings compared to their officials as well as their low level of education. The reason shall also accrue to minimum occasions provided to the personnel at the lower level to know-how in their field of work. The finding has been supported by Sohi and Sandhu (1976) in a study on the knowledge level of VLWs about agricultural practices who reported that on an

over all basis VLWs had inadequate knowledge about agricultural practices. Prashad (1981) in a study on the correlates of knowledge of VLWs about High Yielding Varieties found that 12.5 per cent of the VLWs had 'very poor knowledge' of cultivation, 26.39 per cent where having ' poor knowledge' only 22.92 per cent VLWs were in the 'higher knowledge level' category. Chakravarthy and Singh (1974), Dahama (1968), Bhandari (1959) stressed that the Agricultural Extension personnel should be equipped with thoroughness in technical knowledge.

Discussing on the skill of T & V personnel to communicate the messages to farmers significant differences in perception on the communication act was found to exist between the different categories of personnel, namely, AD, JAO, SMS and SDAO of all the three sub-divisions under study as evidenced by the Table 28. The table also evidenced that amongst the T & V personnel under study, the personnel of the Adoor and Mavelikkara sub-divisions perceived higher followed by that of Neyyattin-kara. This difference in communication skill seems to be naturally correlated with their level of hierarchy, wherein their experience and trainings acquired varies

in the ascending order from the ADs upwards. Incidentally deviating from the previous findings it is interesting to note that the 'SMS' of the Adoor sub-division(Quilon district) and Mavelikkara sub-division (Alleppey district) differed significantly in their acts of communication to that of their counterparts namely, the DSMS. In this context the SMS perceived the communication skill in a higher proportion. Similarly the communication skill perceived by the SDAO and JDA of all the three districts were found to be in par. In support to this study, Singh (1973) in a study of key communicators of agricultural innovations found that communicators differed greatly in their communication skill and the communication skill was also found to be having influence on the communication effectiveness. Prashad and Sandhu (1974) in a study on communication skills of VLWs of Punjab reported that majority of VLWs (46.57 per cent) were having medium level of communication skills. Similarly Jose Joseph (1983) also found that majority of the ADs belonged to the medium level of communication effectiveness. But Rao and Bhave (1972) in a study in Mysore district observed that VLWs knowledge of extension methods was very poor. The results related to the District level officials perception of communication skill is being supported by

Sanoria (1977) who reported that Asst.Directors of Agriculture and AEOs had low communication efficiency, but DDAs were most efficient. The Extension Education Institute in Andhra Pradesh (1979) in a study on T & V system stressed the need to improve the communication skills of SMS for which they should be given training for improving their communication skills.

Discussing on the sub-concept namely the Exercise design which explains the demonstration and prompting farmers to acquire the skills communicated through the messages, Table 29 explains the significantly low perception of the ADS to that of JAOs and SMS of all the three sub-divisions under study. Where as the perception of JAO, SDAO and SMS at the sub-divisional level were in par. This difference in perception of the sub-concept may be due to the lack of instructional opportunities and training received by the lower category personnel in the T & V system. The low level of educationof the ADs also adds to this reason.

In the case of the perception of this sub-concept also as in the case of communication skill the DSMS were found to be significantly inferior to that of the higher calibre of the SMS. This might be due to the opportunities available to the SMS to come into direct access to

the resource personnel as well as the need for getting themselves equipped to do their job better. This sub-concept being a newly introduced one under the special circumstances of the nature or type of programmed instruction built in within the Training Methodology of the T & V system, no review is available.

IV. Sub-conceptwise perception of the T & V personnel at the sub-divisional level and at district level.

Discussing on Table 30 pertaining to the sub-concepts in total in which table compared the four sub-divisional officers, the result evidenced significant difference between the four categories in respect of their perception of the Training objective, Training content, Communication skill and the Exercise design within the training process of the T & V system. Evidently the ADs, JAOs and SMS perceived the sub-concepts in their hierarchial order of importance. Where as the SDAOs within the sub-division found to be perceiving lower to that of the SMS. Reason shall be as mentioned in the earlier findings that the ADs are having comparatively low education level lesser trainings and experience as compared to the other officers in the hierarchy.

Table 31 depicting the perception of the district level personnel to be almost in par in accordance to the earlier findings. Incidently significant difference in perception was found to exist as per this table, with regard to their perception of the training objective and the communication skill between the categories of personnel at the district level, namely, SMS, SDAO, DSMS and JDA.

This might be due to the higher perception of JDA who normally lead and command the monthly workshop and fortnightly sessions respectively.

V. Comparison of T & V personnel on 'Job perception' and 'Job performance'.

A comparative discussion on the mean scores obtained by the T & V personnel with regard to their perception and performance of their job pertaining to trainings under T & V system depicted by Tables 32 to 37 revealed that the ADS, SMS and SDAO of the Adoor sub-division (Quilon district) revealed highest perception of the activities within their job pertaining to the training programmes under the T & V system. Amongst them the ADS

and SDAO also performed the job with the highest degree of importance at the sub-divisional level. Where as it is also interesting to note that the T & V personnel of the Alleppey district (Mavelikkara sub-division) evidenced higher perception and performance on their training activities within the T & V system. Incidently it is notable that the Trivandrum ranked third with lower perception and performance except in the case of JAOs who evidenced highest perception among the three sub-divisions pertaining to their training activities. Such a result where training activities of the Quilon district found to be superior shall accrue to the reason that the region being comprised of having multiple cropping pattern, more farming community as well as a better representation of all the types and systems of farming and cropping conditions.

While comparing the categories of respondents in the study with respect to their perception and performance on the training activities of the T & V system, it is seen from the tables 38 and 39 that the SMS ranks the highest in the degree of importance attached by them on the training activities, namely, their perception as well as in their performance of the job. It is interesting to note that the ADs evidenced least perception and performance

of their training activities. In the order of perception, namely, the degree of importance attached by the personnel to the training activities the SMS were followed by SDAO, JDA, DSMS, JAOs and ADs of the three sub-divisions of the Trivandrum, Quilon and Alleppey districts. Incidently the same order has been evidenced in their performance also except with for a slight change in order, where the JDAs performed lower to that of the DSMS of the three districts. The higher ranking of the SMS may be due to their main function of the Transfer of Technology, namely, the subject matter pertaining to the improved agricultural practices passed on to the farmers as messages forms the most crucial activity in the professional extension service anticipated under the T & V system. Hence they play the key role in performing their job. The lowest perception and performance of the ADs is the cumulation of many reasons spelt out in the earlier discussion of sub-concepts. The degree of perception and the performance is not found to be in the hierarchial order wherein the SDAOs stands higher in the order of DSMS and JDAs. This might be due to the leadership position and feeling of the direct responsibility held by the SDAOs at the sub-divisional level. Limited work is being done in this line of research hence no review on the matter.

VI. Relationship of personal characteristics of T & V personnel with their perception and performance within the T & V system.

Discussing on the relationship of job perception and performance in Table 40 it is seen that the performance of the T & V personnel in the job increases with increase in their perception on the same. This relationship is found to be significant in the case of ADs, JAOs and SMS within the T & V system. The relationship between job perception and performance of the DSMS of the three districts was found to be not significant. This finding has been supported by Kherde and Sahay (1970) who found that the perception of job was positively related with the performance of job of gramsevaks. Mitchell (1973) also reported that behaviour was a function of one's perception and that changing perceptions would result in changing behaviour. Guttman (1971) while emphasising the significance of role perception, stated that 'perceiving is behaving'. He holds that the concepts of perceiving and behaving are systematically interchangeable.

As depicted in Tables 41,42 and 43 with regard to the above categories it is seen that their perception on

the major concepts of the study and their job and as well as their performance significantly related with regard to their age and experience. This finding is being supported by Reddy (1976) who in a study in Karnataka found that age had positive influence on the efficiency level of gramsevaks. Kherde and Sahay (1972) also found that the age of the VLW was positively related to his role performance.

With regard to experience also there are some studies in support of the above finding. Ernest (1970) in a study in Coimbatore observed that efficiency of extension workers increased with years of experience. Kanagasabai and Subramaniam (1975) also revealed that experience is one of the factors in deciding the effectiveness of extension worker.

With regard to education no significant relationship was evidenced in ADs, SMS, DSMS whereas though not significant negative correlation was observed between education and total perception and performance of JAOs. In support of this Kherde and Sahay (1970) reported that education of gramsevaks was negatively associated with their performance. Rajagopal (1977) reported that education of gramsevaks was not associated with their role

performance. Sobhana (1982) also reported the same result in a study of JAOs in Kerala.

In the case of 'Trainings acquired' JAOs had shown significant correlation with their perception of concepts of the Training Methodology and Transfer of Technology as well as with their performance. In case of ADs also significant correlation was observed between the trainings acquired by them and their performance. In line with the above finding Nye (1952) stated that training was one of the factors positively associated with job effectiveness. Kherde and Sahay (1970) found significant relationship between inservice training of extension personnel and their job performance. Apart from them, Kanagasabai and Subramaniam (1975) observed that training had a definite bearing over the efficiency of Deputy Agricultural Officers.

It is interesting to note that the job satisfaction of the ADs, JAOs and SMS found to be significantly related to their perception and performance on job. Where as the JAO's job perception was influenced by their job satisfaction. This is in line with the nature of work assigned to them under the T & V system in comparison to their previous role in the old system of field work within

the Department of Agriculture. In support of this finding Subhalakshmi and Singer (1974) found that nearly two third of the gramsevaks were either very much satisfied or satisfied with their job. Sanoria (1977) observed significant relationship between job satisfaction and communication efficiency of extension personnel. Dhillon and Sandhu (1977) also observed significant relationship between job satisfaction and job effectiveness of extension specialists of a farm advisory service.

VII. Suggestions for the improvement of Training programmes under T & V system.

As depicted in Table 44, it was observed that the T & V personnel were looking forward for practical oriented trainings, utilising Audio visual aids within a fully equipped training centre in each sub-division. Many of them suggested guest lectures, field visits, library facilities in each sub-division, increase in time for both training programmes and a free feedback system. It was clear from the suggestions given by the T & V personnel that, at present there are many drawbacks existing in the T & V system which are actually hindering the success of the T & V programme in Kerala. Observing the frequency

of the respondents who have given the suggestions, the researcher felt that ten suggestions given by the T & V personnel are to be considered immediately by the concerned authorities and necessary action should be undertaken in this regard in order to streamline the whole operation of T & V system in Kerala.

Summarising the discussion Chapter, the study evidenced the lowest perception of Training Methodology and Transfer of Technology by the lower level staff viz. ADs and JAOs. The Officials above them had shown higher perception in this regard. The same trend had been observed with regard to perception of sub-concepts of Training Methodology and Transfer of Technology.

The comparisons made among various categories revealed that the ADs of Mavelikkara and Adoor had perceived the Training Methodology and Transfer of Technology higher than their counterparts in Neyyattinkara. Amongst the JAO and SMS category, those of Adoor and Mavelikkara sub-divisions evidenced highest perception on activities pertaining to Training Methodology and Transfer of Technology respectively, where as the officials above JAO in all the three districts found to be on par in their perception of the activities. The comparison made among the categories

on the perception of sub-concepts of Training Methodology and Transfer of Technology revealed lower perception by ADs and JAOs of Neyyattinkara than their counterparts in other two sub-divisions. Varied perception was observed among the officials above the JAO in all the three districts. In majority of the concepts the officials of Quilon district had better perception. The SDAO, DSMS and JDA of Trivandrum district were found to be better in perception of Communication skill.

The comparisons made between various categories within each sub-division on the perceptionof sub-concepts of Training Methodology and Transfer of Technology revealed that the ADs differed significantly with their officials at sub-divisional level and SMS emerged out as the better group with higher perception of sub-concepts of Training Methodology and Transfer of Technology. At district level all the officials had not differed significantly and their perception of many sub-concepts seems to be on par.

Rightly in their perception of Job and Performance, Trivandrum district ranked third with lower perception and performance except in the case of JAOs who evidenced highest perception on their job. On the whole Quilon district

officials had perceived their job better and performed them better followed by the Alleppey district officials.

The category -wise comparison revealed highest perception and performance by SMS and the least by ADs. The SMS were followed by SDAO, JDA, DSMS and JAOs in their perception and performance.

The relationship between perception and performance was found to be positively significant within the ADs, JAOs and SMS where as it was non-significant in the case of DSMS.

The relationship between personal characteristics and dependent variables revealed that age and experience of ADs, JAOs and SMS had influence on their perception and performance. Education had no relationship with their perception and performance. The performance of both ADs and JAOs had been influenced by the trainings acquired by them. Both ADs and SMS were found to be satisfied with their job. The JAOs job perception had been found to be influenced by their job satisfaction. In all these cases the DSMS category had evidenced no significant relationship between their personal characteristics and their perception and performance.

SUMMARY

CHAPTER - VI

SUMMARY

The T & V system, Benor's brainchild, was first implemented in Kerala on a pilot basis in three districts viz; Trivandrum, Quilon and Alleppey districts in the year 1981. Subsequently it was extended to other parts of the State in the year 1983.

This system emphasises on giving systematic and regular training to the field level extension personnel (VEW), on those important farm practices for the forthcoming fortnight followed by their regular visits to the farmers' field for transfering the know-how they acquired from these trainings.

No study has been undertaken to evaluate the trainings conducted under the T & V system in this State. Hence the present study was undertaken with the following objectives.

1. To analyse the major training components namely, the trainer, the trainee and the subject matter and other components within the T & V system.

2. To study the perception and performance of these training components by the trainees towards achieving effective training programmes within the T & V system.

3. To analyse the methodology of training and the transfer of technology within the T & V system as perceived and employed by the trainees.

4. To find out the relationship between the perception and performance of trainees with their personal characteristics.

For conducting the study, Trivandrum, Quilon and Alleppey districts were selected and from these one sub-division from each district was selected by random sampling procedure. Likewise Neyyattinkara from Trivandrum district, Adoor from Quilon district and Mavelikkara from Alleppey district were selected. All the extension personnel working under the T & V system in these sub-divisions viz., AD, JAO, SMS and SDAO at the sub-divisional level and DSMS and JDA at district level were included in the sample. 'Perception' was measured using a five point continuum ranging from 'Very important' to 'Least important' performance was measured on a four point continuum ranging from 'Always' to 'Never'.

Age was measured as the completed years of age by the respondent at the time of investigation, education on the basis of their academic qualification, experience in terms of number of years rounded to the whole year in service by the respondent, trainings acquired was measured by assigning scores based on the duration and number of trainings received and finally 'Job satisfaction' was measured on a five point continuum ranging from 'Fully satisfied' to ' Dissatisfied'.

Analysis of variance, proportion test of significance, Kruskall - Wallis 'H' test and correlation analysis were the statistical methods followed in this study. On the basis of review three variables viz., 'Perception of Training Methodology and Transfer of Technology', 'Perception on Job' and 'Performance' were selected for the study. The major concepts 'Training Methodology' and 'Transfer of Technology'are conveniently divided into five and three sub-concepts respectively. They are, Training objective, Training content, Treatment, Participation and Follow-up and feedback under Training Methodology and Knowledge of subject matter, Communication skill and Exercise design under Transfer of Technology. Five independent variables viz; Age, Experience, Education,

Trainings acquired and Job satisfaction were also selected to establish their relationship with the dependent variables.

For measuring the dependent variables action statements/ items were prepared and got judged by the Judges and finally 83 statements were selected after testing their significance with '^{2}' test.

The salient findings of the study are summarised and present below.

1. Regarding the perception of Training Methodology and Transfer of Technology the study evidenced highest perception by AD, JAO, SMS, SDAO of Mavelikkara and Adoor sub-divisions than their counterparts in Neyyattinkara sub-divilion.

2. DSMS of Trivandrum district had better perception of the two major concepts.

3. The JDAs of all the three districts had perceived the two major concepts on par.

4. In the same context, the comparisons made between the various categories of T & V personnel revealed lowest perception by ADs and JAOs and highest by JDAs and SMS.

5. The ADs and JAOs of both Mavelikkara and Adoor sub-divisions had better perception of the sub-concepts of Training Methodology and Transfer of Technology, with their counterparts in Neyyattinkara having lower perception.

6. The officials above JAO in Quilon district had higher perception of majority of the sub-concepts except in the perception of 'communication skill' where the SDAO, DSMS and JDA of Trivandrum district were found to be better perceived.

7. At sub-divisional level the SMS had highest perception of all the sub-concepts of Training Methodology and Transfer of Technology except in the perception of 'Participation' where the SDAOs had higher perception.

8. At district level all the categories of T & V personnel were on par in their perception of majority of the sub-concepts.

9. The T & V officials of both Quilon and Alleppey districts had perceived their job higher and performing it better than their counterparts in Trivandrum district.

10. The comparison made between the different categories of T & V personnel with regard to perception and performance of their job revealed highest by SMS category and the least by ADs.

11. The correlation analysis revealed significant positive relationship between perception and performance within the ADs, JAOs and SMS categories.

12. Among the independent variables age and experience had influenced the perception and performance of ADs, JAOs and SMS.

The 'Trainings acquired' by the ADs and JAOs had influence on their performance.

The Job satisfaction of JAOs influenced their job perception. The ADs and SMS were found to be satisfied with their job. In all these respects the DSMS category evidenced no significant relationship between their personal characteristics and their perception and performance.

Implications of the study

Any extension programme, to be successful, the personnel involved in it must have a thorough understanding of the system. The findings above listed show lack of proper understanding of the 'Training Methodology' and 'Transfer of Technology' the two major components of the Training programmes of the T & V system by the field level staff viz. ADs and JAOs where as the officials

above the JAOs had better understanding of the both components. This disparity in perception shows and demands a thorough understanding of the system by the field level staff, who are the personnel coming directly in contact with the farmers field. This disparity can be avoided by clearly definding and explaining the various activities being followed in the trainings to the field level staff. This indirectly demands much more concentrated effort by the officials above the field staff. Similar observation was made with regard to job perception and performance. This can be avoided by clearly defining the various activities to be performed by these two categories, both in the class room (during training) and also in the field. There seems to be an overlapping of job activities of both the categories, unless this is avoided through a clear distinction of jobs of both ADs and JAOs the efforts of the higher officials during the training will not be fruitful.

The comparison made between the districts (sub-divisions) revealed the least perception and performance by T & V personnel of Trivandrum district(Neyyattinkara sub-division with their counterparts in other two districts (sub-divisions) having better perception and

performance. This disparity between the districts can be avoided by strengthening the Evaluation and monitoring cell, so that the system can be studied thoroughly at each and every stage which enables exposing the factors hindering the successful conduct of the trainings in a particular district and helps in identifying the possible solutions to overcome the drawbacks. The suggestions given by the different categories of T & V personnel as listed in the results Chapter have to be taken into consideration immediately.

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APPENDICES

APPENDIX-I

EVALUATION OF THE TRAINING PROGRAMMES UNDER T & V SYSTEM IN KERALA

The two major concepts of the study 'Training Methodology' and 'Transfer of Technology' are being divided into eight sub-concepts. Here follows the action statements/ items selected under each sub-concept of the 'Training Methodology' and 'Transfer of Technology' as perceived by the Judges.

I. Training Methodology

a. Training objective:

1. Review the time taken by the farmers to adopt the messages on practices recommended during the training sessions.
2. Review the number of farmers adopting the messages on practices recommended during the training sessions.
3. Presentation of the results of the farm trials during training with necessary information and data.
4. Presentation of the problems pertaining to the messages recommended during training with an analytical approach.
5. Have a definite analytical procedure or approach while studying the problem.
6. Analysis of problems pertaining to partial or total adoption of a practices.
7. Analysis of the actual situation in which the message is going to be put to practice.
8. Understand the technical and economic feasibility of the message on practice.
9. Modifications to be made to suit the recommendation to the lality where it is adopted.
10. Identify, select and project the impact points built in within the message pertaining to the recommended practices.
11. Formulate and project the impact points pertinent to the adoption of messages on recommend practices.
12. Farm trials on practices to be carried out by extension personnel stuiable to the system of farming in Kerala.

13. Identification of the difficulties that are likely to arise amongst extension personnel while presenting and explaining the recommended practices, during training.

14. Provide expertise to the extension personnel in conveying the message of the recommended practices to farmers through training.

15. Conducting location specific trials to establish the feasibility of the recommended practices in different localities.

16. The extension personnel have to be trained in order to acquire knowledge about the recommended practices.

17. The extension personnel are to be trained to develop skills in demonstrating the recommended practices to the farmers.

18. Provide opportunities for practice of skills and the extension personnel while demonstrations are conducted.

19. Develop preparedness and confidence among the extension personnel through training to convey the recommended practices to farmers.

20. Field orientation of demonstration conducted through timely field visits.

21. Training of extension personnel to prepare lesson plans for systematic, sequential presentation of topics pertaining to the recommended practices in fortnightly training sessions.

b. <u>Training content</u>

1. The climatic condition regarding Rainfall, relative humidity, temperature and their abnormalities prevailed during the fortnight has to be reported.

2. Report has to be made on field situation of main crops with particular attention paid to their main problems.

3. Informing the availability of farm inputs in accordance to the recommendations made during the training.

4. Reporting difficulties faced in presenting recommendations to the farmers, during the training.

5. Report on the progress of solving of farm problems that had been reported in the previous training sessions.

6. Extension methods such conduct of campaigns, demonstrations, discussions organised as important channels for communication of messages are to be reported.

7. A definite procedure has to be framed and systematic followed during training.

8. There should be definite pattern for reporting development and framing of message and transfer of skills while training.

9. A definite pattern will have to be followed to cover the subject matter intended for training.

10. Main crops are to be emphasised in discussions during training.

11. New crops are to be included when and where needed for training messages.

12. Cropwise, practicewise sequential treatment of the subject matter to befollowed during every training session.

13. Subject matter pertaining to practices to be recommended during the fortnight alone has to be discussed.

14. Advanced preparation is needed on the topics to cover the subject matter intended for training.

15. Expecation of field operations for ensuring fortnight.

16. Recommendation of practices for the next two fortnights.

17. Framing practice-wise messages for the next fortnight on recommended practices should be coupled with skills required and their impact points.

18. Local farming practices are to be considered while framing the recommendations.

19. Relevant messages and their lessen plans are to be prepared during training.

20. Recommendations shall be made based on proven results of research.

21. Messages to be modified in accordance tothe changing technology in farming.

22. Modification of the recommendation based on geographical situations climatic conditions, soil types and local farming practices.

23. Make the message location specific.

24. Finalisation of messages with changes required to suit to conditions under different situations on farming.

25. Teaching aids suitable to transfer the messages are to be decided while preparing lesson plans.

26. Messages are to be translated in the language that the farmer could understand and act upon.

27. Presentation and rehearsal of the recommendations are to be made by the extension personnel.

28. Skills pertaining to the messages are to be demonstrated by the trainers and practiced by the trainees.

29. Develop conviction amongst the trainees on the messages to be transferred to the farmers.

30. Field visits are to be conducted during training with extension personnel participation.

31. Confidence and expertise have to be developed to transfer the skills while training.

32. The training programmes should involve different categories of extension personnel required for successful conduct of the trainings.

33. The subject matter content of practices shall be made flexible to suit the practices to local conditions.

c. <u>Treatment</u>

1. Every training programme should include reporting and feedback of problems.

2. The T&V personnel and resource personnel will have to be regularly meet and discuss on messages to be transferred during the conduct of the training.

3. Pre-seasonal trainings have to be organised for trainees and tainers as an exercise.

4. Transfer of skills relevant to the messages framed through demonstration should form a part of the training programme.

d. Participation

1. Transfer of the technical know-how between the trainer and trainees has to be achieved through effective participation.

2. Experienced interaction of the trainees and trainers is a must during training.

3. The participation of the trainees within the process of transfer of technology shall be in terms of their field experience.

e. Follow-up and feedback

1. Resource personnel to feedback with relevant solutions to problems presented while reporting.

2. The solutions on the problems posed are to be passed on to the farmer for implementation.

3. Information pertaining to the difficulties and implications giving rise to problems in achieving total and option of the messages by the farmers are to be collected and informed to the training personnel.

4. The trainees has to provide their observations pertaining to the condition of the problems of the farmers to the trainers.

5. Problems faced by the farmers in achieving total adoption of recommended practices will have to be identified, analysed and studied with reference to local condition.

II. Transfer of Technology

a. Knowledge of subject matter

1. The extension personnel should have the knowledge on recommendations made as seasonal practices on crops.

2. The extension personnel are to upto date their knowledge in accordance to research achievements and developments in farming.

3. Ensure that the knowledge transferred through messages as recommended practices are practicable by the farmers of the locality.

4. Knowledge to be possessed as cropping patterns and practices under irrigated and non-irrigated conditions.

5. Knowledge regarding cultivation of crops during the seasons and local farming practices is to be acquired by the extension personnel.

6. Deeper knowledge on the topics to be discussed in the trainings is essential.

b. Communication skill

1. Enough tools and equipments are to be made available for effective communication.

2. Transfer the messages on farming with supporting aids during training.

3. Identify skills to be communicated in every message that are to be transferred during training.

4. acquisition of ability to communicate skills pertaining to messages to be communicated to farmers.

5. Practising sessions on skills are to be organised during training.

6. Presentation of skills are to be supported with charts, slides and specimens and such other aids.

7. Teaching aids including lesser plans are to be prepared and used by trainers during the training.

8. Lesser plans prepared are to be covered by practical skills for their effective performance.

C. Exercise Design

1. Demonstration outlines are to be prepared and used.

2. Make the extension personnel expert on the knowledge of subject matter with a definite instructional approaches bettering their skills in communication to farmers.

3. Emphasis to be given on demonstration, their practice by trainees thus prompting them to learn through practice of skills during training.

APPENDIX-II

From

Dr.A.M.Thampi
Head of the Department
Department of Agrl.Extension,
College of Agriculture,
Vellayani.

Department of Agrl.Extension
College of Agriculture,
Vellayani, Trivandrum.

Sub:- M.Sc.(Ag) Thesis problem of Sri.Rajababu-
Response to Questionnaire regarding.

Sir,

Sri.Rajababu, a student doing his M.Sc. in Agrl. Extension, is working on a project for dissertation titled "Evaluation of Training programmes under T&V System in Kerala" In this context he has prepared and tested a set of statements judged by Ext.specialists, Teachers and officials of the Department of Agriculture. Those statements considered to be pertinent to the roles of the T&V personnel regarding training alone, under T&V System in Kerala has been included in the Questionnaire enclosed.

I humbly request that the Questionnaire may kindly be studied and mark your response interms of importance attached by you to each item/role and simultaneously denote your degree of performance of the same by putting (/) in the appropriate columns expersing your perception and performance of the same.

Since your response is anonymous (without mentioning your name) please frankly express yourresponses, so as to enable the administrators to improve up on if any, the working of the system.

Expecting your cooperation on the matter.

With regards,

Yours sincerely,

Sd/-
(Dr.A.MURALIDHARAN THAMPI)

To

(True copy)

Statements	Perception					Performance *			
	Very Imp.	Imp.	Undecided	Less imp.	Not imp.	Always	Often	Some times	Never
1. Analysis of problems pertaining to partial or total adoption of a practice.									
2. Identification of the difficulties that are likely to arise amongst extension personnel while presenting and explaining the recommended practices, during training.									
3. Provide opportunities for practicing of skills by the extension personnel while demonstrations are conducted.									
4. Provide expertise to the extension personnel in conveying the message of the recommended practices to farmers through training.									
5. Develop preparedness and confidence amongst extension personnel through training to convey the recommended practices to farmers.									
6. Expectation of field operations for ensuing fortnight on major crops.									
7. Practicing sessions in skills are to be organised during training.									
8. A definite procedure has to be framed and insist systematically followed during trainings.									
9. Enough tools and equipments are to be made available for effective communication of skills on recommended practices.									
10. Modifications to be made to suit the recommendations to the locality where it is adopted.									
11. Identify, select and project the impact points builtin within the message pertaining to the recommended practices.									
12. Modification of recommendation based on gegraphical situations, climatic conditions, soil types and local farming practices.									
13. The practical feasibility of recommendations to be cared for.									
14. Recommendations shall be made based on proven results of research.									
15. Framing practicewise messages for the next fortnight on recommended practices should be coupled with skills required and their impact points.									
16. Make the message location specific.									
17. Message to be modified in accordance to the changing technology in farming.									
18. Teaching aids suitable to transfer the message are to be decided while preparing lesson plans.									
19. Skills pertaining to the messages are to be demonstrated by the trainers and practiced by the trainees.									
20. Develop conviction amongst the trainees on the messages to be transferred to the farmers.									

* Performance was measured only for those statements relevant to each category of T & V personnel.

Statements	Perception					Performance			
	Very imp.	Imp.	Undecided	Less imp.	Not imp.	Always	Often	Some times	Never
21. Messages are to be translated in the language that the farmer could understand and act upon.									
22. Advanced preparation is needed on the topics to cover the subject matter intended for training.									
23. Main crops are to be emphasised in discussions during training.									
24. Pre-seasonal trainings have to be organised for trainees and trainers as an exercise.									
25. Emphasis to be given on demonstration, their practice by trainees, thus prompting them to learn through practice of skills during training.									
26. Review the time taken by the farmers to adopt the messages on practices recommended, during the training sessions.									
27. Review the number of farmers adopting the messages on practices recommended during the training sessions.									
28. Analysis of the actual situation in which the message is going to be put to practice.									
29. Every training programme should include reporting and feedback of problems.									
30. Problems faced by the farmers in achieving total adoption of recommended practices will have to be identified, analysed and studied with reference to local condition.									
31. The ext.personnel should have the knowledge on recommendations made on seasonal practices on crops.									
32. The ext.personnel are to update their knowledge in accordance to research achievements and developments in farming.									
33. Ensure that the knowledge transfered through messages on recommended practices are practicable by the farmers of the locality.									
34. The training programme should involve different categories of ext. personnel required for successful conduct of the trainings.									
35. Presentation of the problems pertaining to the messages recommended during training with an analytical approach.									
36. Field orientation of demonstration conducted through timely field visits.									
37. The climatic condition regarding Rainfall, Relative Humidity, Temperature and their abnormalities prevailed during the fortnight has to be reported.									
38. Report has to be made on field situation of main crops with particular attention paid to their main problems.									
39. Informing the availability of farm inputs in accordance to the recommendations made during the training.									
40. Reporting difficulties faced in presenting recommendations to the farmers, during the training.									

Statements	Perception					Performance			
	Very imp.	Imp.	Undecided	Less imp.	Not imp.	Always	Often	Some times	Never
41. Report on the progress of solving of form problems that had been reported in the previous training sessions.									
42. Extension methods such as conduct of campaigns, demonstrations, discussions, organised as imp. channels for communication of messages are to be reported.									
43. Presentation of the results of farm trials in monthly workshop with necessary information and data.									
44. There should be definite pattern for reporting, development and framing of message and transfer of skills while training.									
45. The T&V personnel and resources personnel will have to regularly meet and discuss on messages to be transferred during the conduct of the training.									
46. Have definite analytical procedure or approach while studying the problem.									
47. The extension personnel have to be trained in order to acquire knowledge about the recommended practices.									
48. The ext.personnel are to be trained to develop skills in demonstrating the recommended practices to the farmers.									
49. Recommendation of practices for the next fortnight.									
50. Field visits are to be conducted during training with ext.personnel participation.									
51. Confidence and expertise have to be developed to transfer the skills while training.									
52. A definite pattern will have to be followed to cover the subject matter intended for training.									
53. Transfer of the technical know-how between the resource personnel (trainer) and trainees has to be achieved through effective participation.									
54. Experienced interaction of the trainees and trainers is a must during training.									
55. Information pertaining to the difficulties and implications giving rise to problems in achieving total adoption of the messages by the farmers are to be collected and informed to the training personnel.									
56. The trainees has to be provided their observations pertaining to the condition of the problems of the farmers to the trainers.									
57. Transfer with messages on farming with supporting aids during training.									
58. Identify skills to be communicated in every message that are to be transferred during training.									
59. Acquisition of ability to communicate skills pertaining to messages to be communicated to farmers.									
60. Demonstration outlines are to be prepared and used.									
61. Understand the technical and economic feasibility of the message on practices.									

Statements	Perception					Performance			
	Very imp.	Imp.	Undecided	Less imp.	Not imp.	Always	Often	Some times	Never
62. Knowledge to be possessed on cropping patterns and practices under irrigated and non-irrigated conditions.									
63. Knowledge regarding cultivation of crops during the seasons and local farming practices is to be acquired by the ext. personnel.									
64. Deaper coverage on the topics discussed is essential during training.									
65. Modification of the recommendation based on geographical situations, climatic conditions, soil types and local farming practices.									
66. Presentation of skills are to be supported with charts, slides and specimens and such other aids.									
67. Maincrops are to be emphasised in discussions during training.									
68. Cropwise, practicewise, sequential treatment of the subject matter to be followed during every training session.									
69. Subject matter pertaining to practives to be recommended during the fortnight alone has to be discussed.									
70. Conducting location specific trials to establish the feasibility of the recommended practices in different localities.									
71. Formulate and project the impact points pertinent to the adoption of messages on recommended practices.									
72. Farm trials on practices to be carried out by ext.personnel suitable to the system of farming in Kerala.									
73. Local farming practices are to be considered while framing the recommendations.									
74. Finalisation of messages with changes required to suit to conditions under different situations on farming.									
75. Relevant messages and their lesson plans are to be prepared during training.									
76. Presentation and rehearsal of the recommendation are to be made by the ext.personnel.									
77. New crops are to be included when and where needed for framing messages.									
78. Teaching aids including lesson plans are to be prepared and used by trainers during the training.									
79. Lesson plans prepared are to be covered by practical skills for their effective performance.									
80. Make the extension personnel expert on the knowledge of subject matter with a definite instructional approach bettering their skills in communication to farmers.									
81. Training of ext.personnel to prepare lesson plans for systematic sequential presentation of topics pertaining to the recommended practices in fortnightly training sessions.									
82. Resources personnel to feedback with relevant solutions to problems presented while reporting.									

Statements	Perception					Performance			
	Very imp.	Imp.	Undecided	Less imp.	Not imp.	Always	Often	Sometimes	Never
83. Transfer of skills relevent to the messages framed through demonstration should form a part of the training programme.									

Thanking you,

Please given your response for the following statements by marking(in the appropriate columns given below

Statements	Fully satis-fied	Satis-fied	Undeci-ded	Least satis-fied	Dissa-tis-fied
1.Are you satisfied that you are given enough authority to do your job?					
2.Are satisified that your su-periors give your proper recognition to the work done by you.					
3.Are you satisfied with the guidance givenby your super-ors in your job?					
4.How satisfied are you with the cooperation given by your colleagues.					
5.How satisfied are you with your salary.					
6.How satisfied are you with regard to promotion opportu-nities in the present job.					
7.How satisified are you with the transport facilities available in your work place?					
8.Are you satisified with the housing and medical facili-ties available in your work place.					
9.How satisfied are you with the amount of time and energy you are devoting to your present position and the satis-faction you derived from your position.					
10.How satisfied are you with the workload in your job.					
11.Are you satisfied with the progress you are making towards the goals which you had set for yourself in your present posi-tion.					
12.Are you satisfied that you are able to prove your merit in the present job.					

Please furnish the following particulars:-

1. Age (completed years) :
2. Experience (completed years)
   a) Experience in the present post : Period
   b) Experience in other posts held (please specify the other posts held by you) :
3. Educational Qualifications:
   a) Upto S.S.L.C. ( )
   b) PDC/Intermediate/Diploma ( )
   c) Graduation other than Agriculture ( )
   d) Graduation in Agriculture ( )
   e) Post-graduate ( )
4. Trainings Acquired:

	Duration	Number of Trainings
a) Pre-service/Induction/ Orientation Training		
b) Inservice training		

5. Give your suggestions for the improvement of the training under T&V system:

Thanking you,

APPENDIX-III

ഡിപ്പാർട്ടുമെന്റ് ഓഫ് അഗ്രി. എക്സ്റ്റൻഷൻ
കോളേജ് ഓഫ് അഗ്രികൾച്ചർ,
വെള്ളായണി, തിരുവനന്തപുരം.

ഡോ. എ. എം. തമ്പി,
ഹെഡ് ഓഫ് ഡിപ്പാർട്ടുമെന്റ്,
കോളേജ് ഓഫ് അഗ്രികൾച്ചർ,
വെള്ളായണി.

സർ,

അഗ്രികൾച്ചറൽ എക്സ്റ്റൻഷൻ വിഭാഗത്തിൽ എം.എസ്.സിക്ക് പഠിക്കുന്ന ശ്രീ. രാജയ്യ '<u>കേരളത്തിലെ ടി ആന്റ് വി. സമ്പ്രദായത്തിൻ കീഴിലുള്ള പരിശീലന പദ്ധതികളുടെ വിലയിരുത്തൽ</u>' എന്ന വിഷയത്തിൽ ഗവേഷണം നടത്തുന്നു. ഈ ആവശ്യത്തിനായി അദ്ദേഹം തയ്യാറാക്കിയിട്ടുള്ള ഒരു ചോദ്യാവലിയാണിത്. കേരളത്തിൽ നടപ്പിലാക്കിവരുന്ന ടി ആന്റ് വി പദ്ധതിയിലെ പരിശീലനം സംബന്ധിച്ച് കൃഷി വകുപ്പുദ്യോഗസ്ഥരുടെ ചുമതലകൾ എന്തൊക്കെയാണ് എന്നതിനെ കുറിച്ചുള്ള ചില പ്രസ്താവനകളാണ് ചോദ്യാവലിയിലുള്ളത്.

ഈ പ്രസ്താവനകളെ സംബന്ധിച്ച് താങ്കൾക്ക് (എ) വിഷയഗ്രഹണവും പ്രാധാന്യവും, (ബി) നിർവ്വഹണവും അതിനോട് ചേർന്നുള്ള കോളങ്ങളിൽ ( ) മാർക്ക് ചെയ്ത് സൂചിപ്പിക്കുക.

താങ്കളുടെ പേര് എവിടെയും സൂചിപ്പിക്കേണ്ടതില്ല. അതിനാൽ പ്രസ്താവനകളെ സംബന്ധിച്ചുള്ള താങ്കളുടെ തുറന്ന അഭിപ്രായങ്ങൾ സൂചിപ്പിക്കുമല്ലോ.

ഇക്കാര്യത്തിൽ താങ്കളുടെ പൂർണ്ണമായ സഹകരണം പ്രതീക്ഷിക്കുന്നു.

താങ്കളുടെ വിശ്വസ്തൻ,

(ഡോ: മുരളീധരൻ തമ്പി)

(True copy)

പ്രസ്താവനകൾ.	വിജ്ഞാനവും പ്രാധാന്യവും					നിർവ്വഹണം			
	വളരെ പ്രാധാന്യമുള്ളത്.	പ്രാധാന്യമുള്ളത്.	നിർണ്ണയിക്കാനാവില്ല.	കുറഞ്ഞ പ്രാധാന്യം	പ്രാധാന്യമില്ല.	എല്ലായ്പ്പോഴും	പലപ്പോഴും	ചിലപ്പോൾ	ഒരിക്കലുമില്ല.
1	2	3	4	5	6	7	8	9	10
1. ട്രെയിനിംഗ് സമയത്ത് കൂടി സംബന്ധമായ ശുപാർശകൾ തയ്യാറാക്കാൻ സാധി ക്കുന്ന കർഷകർ ഈ പ്രദേശത്തിൽ വന്നു ചേരുന്നതിനുള്ള കാലതാമസം കുറ-ക്കേണ്ടതാണ്.									
2. ട്രെയിനിംഗ് സമയത്ത് കൂടി സംബന്ധമായ ശുപാർശകൾ നൽകാൻ സാധി ക്കാത്ത കർഷകർ നല്ലതായ ... കണ്ടെത്തണം.									
3. ട്രെയിനിംഗിന് മുമ്പുള്ള രണ്ടാഴ്ചക്കാലത്ത് പ്രാദേശികമായി അനുഭവപ്പെട്ട കാലാവസ്ഥയെ (മഴ, ഊഷ്മാവ്, ആപേക്ഷിക ആർദ്രത) സംബന്ധിച്ച - വിവരങ്ങൾ നൽകേണ്ടതാണ്.									
4. കാലാകാലങ്ങളിൽ കർഷകർ നേരിടുന്ന വിളകളുടെ കൃഷിയിൽ ഉണ്ടാകുന്ന പ്രശ്നങ്ങൾ റിപ്പോർട്ട് ചെയ്യേണ്ടതാണ്.									
5. ശുപാർശകൾ തയ്യാറാക്കുന്നതിലേക്കായി ആവശ്യമായ സാമഗ്രികളുടെ (വളം, വിത്ത്, കീടനാശിനികളുടെ) ലഭ്യത സംബന്ധിച്ച വിവരം നൽകേണ്ടതാണ്.									
6. കർഷകർക്ക് ശുപാർശകൾ പകർന്നുകൊടുക്കുന്നതിന് ഉതകുന്ന സഹായികൾ ട്രെയിനിംഗ് സമയത്ത് അവതരിപ്പിക്കേണ്ടതാണ്.									
7. സന്ദേശങ്ങൾ പകർന്നു കൊടുക്കുന്നതിന് കർഷകരുടെയിടയിൽ നടക്കുന്ന ... സംഘടനകൾ, പാർട്ടികൾ, കാര ... മുതലായവയുടെ വിവരങ്ങൾ ശേഖരിക്കേണ്ടതാണ്.									
8. ശുപാർശകളുമായി ബന്ധപ്പെട്ട പ്രശ്നങ്ങൾ കാര്യകാരണസഹിതം വിശകലനം - ചെയ്യേണ്ടതാണ്.									
9. വരുന്ന രണ്ടാഴ്ചക്കാലത്തേക്കുള്ള ശുപാർശകൾ ക്രോഡീകരിക്കാനായി ട്രെയിനിംഗിൽ ശ്രമിക്കണം.									
10. ശുപാർശകളെ സംബന്ധിച്ച സന്ദേശങ്ങൾ സാധ്യമായതും സ്വീകാര്യമായ പ്രായോഗിക മാർഗ്ഗമാക്കണം.									
11. എക്സ്റ്റൻഷൻ പ്രവർത്തകർ ശുപാർശകൾ ക്രമമായി അവതരിപ്പിച്ച് ചർച്ച ചെയ്യേണ്ടതാണ്.									
12. ശുപാർശകളെ സംബന്ധിച്ച് ഉയർന്നു വരുന്ന സംശയങ്ങളും എക്സ്റ്റൻഷൻ പ്രവർത്തകർ ട്രെയിനിംഗിൽ ഉന്നയിക്കണം.									
13. ശുപാർശകൾ പ്രായോഗികമായി കർഷകരിലെത്തിക്കുന്നതിന് എക്സ്റ്റൻഷൻ പ്രവർത്തനത്തെ പ്രായോഗിക രീതികൾ പരിശോധന നടത്തണം.									

പ്രസ്താവനകൾ.	വിജ്ഞാനവും പ്രാധാന്യവും					നിർവ്വഹണം			
	വളരെ പ്രാധാന്യമുള്ളത്.	പ്രാധാന്യമുള്ളത്.	നിശ്ചയമില്ല.	കുറഞ്ഞ പ്രാധാന്യം.	പ്രാധാന്യമില്ല.	എല്ലായ്പ്പോഴും	പലപ്പോഴും	ചില- പ്പോൾ	ഒരിക്കലുമില്ല
1	2	3	4	5	6	7	8	9	10
14. കർഷകർക്ക് പ്രായോഗിക പരിശീലനം പകർന്നുകൊടുക്കുന്നതിന് ഏറ്റവും അനുയോജ്യവും ഫലപ്രദവുമായ ഒരു മാർഗം പരിശീലന സന്ദർശനമാണ്.									
15. ഓരോ പരിശീലന പരിപാടിയിലും പ്രശ്നങ്ങൾ കണ്ടെത്തുന്നതിനും പരിഹാരം തേടുന്നതിനുമുള്ള സംവിധാനം വേണം.									
16. ഒരു വർഷ കാലയളവിൽ നടക്കുന്ന പ്രവർത്തനങ്ങളെ സംബന്ധിച്ച കാര്യങ്ങൾ മാസം തോറും ശാസ്ത്രജ്ഞന്മാർ ചർച്ച ചെയ്യണം.									
17. സാങ്കേതിക പരിശീലനം നൽകാൻ നിയോഗിക്കുന്നവർക്ക് പരിശീലന പരിപാടിയിൽ പരിശീലകരെന്ന നിലയിലും ശാസ്ത്രജ്ഞരെന്ന നിലയിലും പങ്കാളിത്തം ഉറപ്പുവരുത്തണം.									
18. ശാസ്ത്രജ്ഞന്മാർ നടത്തുന്ന പരിശീലനങ്ങളും, ശാസ്ത്രജ്ഞരെയും ബന്ധപ്പെട്ട വകുപ്പുകൾ ഏകോപിപ്പിക്കണം.									
19. സംസ്ഥാനതല ശില്പശാലകൾ ഓരോ മേഖലയിലെ വിഷയങ്ങൾ പ്രാദേശികമായി കണ്ടെത്തുകയും വിശകലനം ചെയ്യുകയും പഠിക്കുകയും വേണം.									
20. ഓരോ വിഷയങ്ങൾ സംബന്ധിച്ച വിദഗ്ധരായ ശാസ്ത്രജ്ഞർ നടത്തുന്ന പരിശീലനങ്ങൾ നല്കണം.									
21. ഓരോ പ്രശ്നങ്ങൾ സംബന്ധിച്ച് ശാസ്ത്രജ്ഞർക്ക് നടത്തിയ നിരീക്ഷണങ്ങളും അറിയിച്ചിരിക്കേണ്ടതാണ്.									
22. പ്രതികരണത്തിനുള്ള നിർദ്ദേശങ്ങൾ കർഷകർ പറഞ്ഞുകൊടുക്കുന്നത് പ്രാവർത്തികമാക്കേണ്ടതാണ്.									
23. കൃ. ഓഫീസർമാർ ഓരോ വിളയുടെയും വിവിധ ഇനങ്ങളെ പറ്റിയും പ്രാദേശികമായി കർഷകർ ചെയ്യുന്ന രീതികളെയും കൃ. ഓഫീസർമാർ മനസ്സിലാക്കിയിരിക്കണം.									
24. ഓരോ സാങ്കേതികവിദ്യയും, പ്രാദേശികമായും വർഷം തോറും നടത്തേണ്ട പരിശീലനങ്ങളും കൃ. ഓഫീസർമാർ അറിഞ്ഞിരിക്കണം.									
25. ഗവേഷണ ഫലങ്ങളെക്കുറിച്ച് കൃ. ഓഫീസർമാർ നന്നായി അറിഞ്ഞിരിക്കണം.									
26. സാങ്കേതിക രീതി പ്രായോഗികമായി കർഷകർ പ്രയോഗത്തിൽ വരുത്തുന്നത് ഉറപ്പു വരുത്തണം.									
27. പ്രായോഗിക പരിശീലനം പകർന്നുകൊടുക്കുന്നതിൽ ശാസ്ത്രജ്ഞരുടെ പങ്ക്.									

പ്രസ്താവനകൾ	[illegible]					[illegible]			
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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28. [illegible]									
29. [illegible]									
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37. [illegible]									
38. [illegible]									
39. [illegible]									
40. [illegible]									
41. [illegible]									
42. [illegible]									

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٥٣. أحمد المعلومات سلامة وتقرأ .
أحمد الصلاة تقرأ عند الصلاة في البيت
. صلاة والقراءة في المكتبة .

١٥. أحمد الصلاة والقراءة المعلومات في .
. صلاة

٥٢. سلامة والوقوف الصلاة .
الصلاة في الجامعة المعلومات
. في المكتبة في صلاة

٥٣. والقراءة الصلاة ، والمعلومات .
في البيت قراءة الصلاة في المكتبة
. صلاة

٥٤. في البيت المعلومات الصلاة .
علم في الله على صلاة الصلاة
. والقراءة

٥٥. الصلاة المكتبة والصلاة في المكتبة .
. والمعلومات في

٥٦. البيت في صلاة الله الصلاة .
المكتبة الصلاة والقراءة
. والصلاة

٥٧. البيت على الصلاة المعلومات في .
والصلاة الصلاة والقراءة
. البيت على

٥٨. والمعلومات في والصلاة المكتبة .
. الله الصلاة على الصلاة والقراءة

٥٩. في والقراءة الصلاة في الصلاة .
في الصلاة والقراءة الصلاة
. والصلاة المكتبة في البيت

٦٠. الصلاة والمعلومات في والقراءة .
البيت على الصلاة والقراءة في
. الصلاة

١	٢	٣	٤	٥	٦	٧	٨	٩	١٠
. الصلاة والقراءة	صلاة والقراءة في البيت	والصلاة في المكتبة	والقراءة الصلاة	في البيت والصلاة	. والقراءة في الصلاة	والقراءة في	والصلاة	والقراءة	والصلاة

٤٦. الكتاب و الصلاة والقراءة في المكتبة
والصلاة الصلاة والقراءة في البيت
. والقراءة الكتاب والصلاة

٤٧. في الله الصلاة والقراءة والصلاة .
-البيت والقراءة في الصلاة
. والصلاة الكتاب

٤٨. والصلاة والقراءة في المكتبة ، والصلاة
والقراءة الصلاة والصلاة في الله
والصلاة في البيت والقراءة .
. في الله

٤٩. والقراءة الصلاة والصلاة في .
. في والصلاة والقراءة

٥٠. والقراءة ، والصلاة والقراءة .
والصلاة والقراءة الصلاة
. والصلاة

٥١. والقراءة والصلاة في الصلاة .
والقراءة الصلاة والقراءة
. والصلاة

٥٢. الصلاة والقراءة في البيت والصلاة
والقراءة في المكتبة والصلاة
. والقراءة

٥٣. والقراءة الصلاة والقراءة في .
في البيت والصلاة والقراءة
. والصلاة

٥٤. في البيت والقراءة والصلاة في
المكتبة والصلاة والقراءة في
. البيت والصلاة

٥٥. والقراءة في البيت والصلاة .
والقراءة الصلاة والقراءة في
. البيت والصلاة

٥٦. والقراءة في البيت والصلاة .
والقراءة الصلاة والقراءة في
. البيت والصلاة

٥٧. والقراءة في البيت والصلاة .
والقراءة الصلاة والقراءة في
. البيت والصلاة

٥٨. والقراءة في البيت والصلاة .
والقراءة الصلاة والقراءة في
. البيت والصلاة

٥٩. والقراءة في البيت والصلاة .
والقراءة الصلاة والقراءة في
. البيت والصلاة

٦٠. والقراءة في البيت والصلاة .
والقراءة الصلاة والقراءة في
. البيت والصلاة

١	٢	٣	٤	٥	٦	٧	٨	٩	١٠
عدد الأيام	متوسط الأجر اليومي	الأجر اليومي الأعلى	الأجر اليومي الأدنى	الانحراف المعياري	الوسيط	المنوال	المدى	مجموع الأيام	عدد العمال
المقارنة بين توزيعين									
٢٠	٢٥	٣٠	٣٥	٤٠	٤٥	٥٠	٥٥	٦٠	٦٥

١٠. قارن بين توزيعين تكراريين باستخدام معامل الاختلاف.

١١. احسب معامل الالتواء لبيانات توزيع تكراري.

١٢. ما هو معامل التفلطح؟ وما أنواعه؟

١٣. احسب معامل التفلطح لبيانات توزيع تكراري.

١٤. ما العلاقة بين الالتواء والتفلطح؟

١٥. ما هي خصائص التوزيع الطبيعي؟

١٦. ما أهمية التوزيع الطبيعي في الإحصاء؟

١٧. ما هي المنحنى الطبيعي القياسي؟

١٨. كيف يمكن تحويل متغير عادي إلى متغير طبيعي قياسي؟

١٩. ما هي خصائص منحنى التوزيع الطبيعي؟

٢٠. كيف يمكن استخدام التوزيع الطبيعي في حل المشكلات العملية؟

٢١. ما هي شروط استخدام التوزيع الطبيعي؟

٢٢. ما هي طرق اختبار مدى ملاءمة التوزيع الطبيعي؟

٢٣. ما هي طريقة الرسم البياني لاختبار التوزيع الطبيعي؟

٢٤. ما هي طريقة المعاملات لاختبار التوزيع الطبيعي؟

٢٥. ما هي طريقة الاختبار الإحصائي لاختبار التوزيع الطبيعي؟

٢٦. ما هي طريقة كا٢ لاختبار التوزيع الطبيعي؟

٢٧. ما هي طريقة كولموجوروف-سميرنوف لاختبار التوزيع الطبيعي؟

٢٨. ما هي طريقة شابيرو-ويلك لاختبار التوزيع الطبيعي؟

٢٩. ما هي طريقة جارك-بيرا لاختبار التوزيع الطبيعي؟

٣٠. ما هي طريقة دالجوبا-ويلكنسون لاختبار التوزيع الطبيعي؟

٣١. ما هي طريقة أندرسون-دارلنج لاختبار التوزيع الطبيعي؟

٣٢. ما هي طريقة شابيرو-فرانسيا لاختبار التوزيع الطبيعي؟

٣٣. ما هي طريقة رايان-جوينر لاختبار التوزيع الطبيعي؟

٣٤. ما هي طريقة إبستين لاختبار التوزيع الطبيعي؟

٣٥. ما هي طريقة هوسكينج لاختبار التوزيع الطبيعي؟

٣٦. ما هي طريقة لين-موديكا لاختبار التوزيع الطبيعي؟

٣٧. ما هي طريقة بوكس-كوكس لاختبار التوزيع الطبيعي؟

٣٨. ما هي طريقة يوه-جونسون لاختبار التوزيع الطبيعي؟

٣٩. ما هي طريقة زار لاختبار التوزيع الطبيعي؟

٤٠. ما هي طريقة بيرسون لاختبار التوزيع الطبيعي؟

٤١. ما هي طريقة كندال لاختبار التوزيع الطبيعي؟

٤٢. ما هي طريقة سبيرمان لاختبار التوزيع الطبيعي؟

٤٣. ما هي طريقة فشنر لاختبار التوزيع الطبيعي؟

٤٤. ما هي طريقة ولكوكسون لاختبار التوزيع الطبيعي؟

٤٥. ما هي طريقة مان-ويتني لاختبار التوزيع الطبيعي؟

٤٦. ما هي طريقة كروسكال-والاس لاختبار التوزيع الطبيعي؟

٤٧. ما هي طريقة فريدمان لاختبار التوزيع الطبيعي؟

٤٨. ما هي طريقة كوكران لاختبار التوزيع الطبيعي؟

٤٩. ما هي طريقة ماكنمار لاختبار التوزيع الطبيعي؟

٥٠. ما هي طريقة ستيوارت-ماكسويل لاختبار التوزيع الطبيعي؟

٥١. ما هي طريقة برسلو-داي لاختبار التوزيع الطبيعي؟

٥٢. ما هي طريقة بريسلو-داي لاختبار التوزيع الطبيعي؟

٥٣. ما هي طريقة برسلو-داي لاختبار التوزيع الطبيعي؟

പ്രസ്താവനകൾ	വിജ്ഞാനവും പ്രാധാന്യവും					നിർവ്വഹണവും			
	വളരെ പ്രാധാന്യമുള്ളത്.	പ്രാധാന്യമുള്ളത്.	നിശ്ചയമില്ല.	കുറഞ്ഞ പ്രാധാന്യം.	പ്രാധാന്യമില്ല.	എല്ലായ്പ്പോഴും	പലപ്പോഴും	ചിലപ്പോൾ	ഒരിക്ക...
1	2	3	4	5	6	7	8	9	1...
76. കാർഷികശാസ്ത്രജ്ഞരുടെ ഗവേഷണ ഫലങ്ങളിലൂടെ ലഭ്യമായ ഉപകരണങ്ങൾ ലഭിക്കുന്നതിന് സമയത്ത് ലഭ്യമാക്കുക.									
77. ഗവേഷണ ഫലവിതരണത്തിന് ആവശ്യമായ ചാർട്ടുകൾ, ഫിലിമുകൾ, സ്ലൈഡുകൾ മുതലായ ഉപാധികൾ ഉപയോഗിക്കണം.									
78. ലഘുലേഖകൾ ഉൾപ്പെടെയുള്ള ഉപാധികൾ ലഭിക്കുന്നതിന് പരിശീലകർ ഉണ്ടാകണം ഉപയോഗിക്കുകയും വേണം.									
79. പ്രാദേശികമായ നിർവ്വഹണത്തിനാവശ്യമായ ഗവേഷണഫലങ്ങൾ ഉൾക്കൊള്ളുന്ന ലഘുലേഖകൾ ലഭ്യമാക്കണം.									
80. പ്രദർശനങ്ങൾ ഉപയോഗിച്ച് ചർച്ചാക്ലാസ്സുകൾ നടത്തണം.									
81. ഗവേഷണകേന്ദ്രങ്ങളിലെ ഗവേഷണ ഫലങ്ങൾ കാണിച്ചുകൊടുക്കാൻ വേണ്ട സന്ദർശനം ഉൾക്കൊള്ളുന്ന പരിപാടികൾ ഗവേഷണകേന്ദ്രത്തിൽ നടത്തണം.									
82. കൃഷിഭവനങ്ങളിലൂടെ കർഷകർക്ക് ... പ്രവർത്തകർ ഉണ്ടാകണം.									
83. വിജ്ഞാന വ്യാപന ... പരിപാടികൾ ... നടത്തണം.									

താഴെ കൊടുത്തിരിക്കുന്ന പ്രസ്താവനകളോട് നിങ്ങളുടെ പ്രതികരണം യോജിച്ച കോളത്തിൽ ( )ചിഹ്നം കൊടുത്ത് രേഖപ്പെടുത്തുക.

പ്രസ്താവനകൾ.	പൂർണ്ണ - സംതൃപ്തി ഉണ്ട്.	സംതൃപ്തി ഉണ്ട്.	തീർച്ച- കല്പിച്ചിട്ടില്ല.	തീരെ- സംതൃപ്തി യില്ല.	അസംതൃപ്തി ഉണ്ട്.
1. നിങ്ങളുടെ ജോലി ചെയ്യുന്നതിനു കിട്ടിയ അധികാരങ്ങൾ കൊണ്ട് - നിങ്ങൾ സംതൃപ്തനാണോ.					
2. ചെയ്യുന്ന ജോലികൾക്ക് മേലധികാരികൾ നൽകുന്ന അംഗീകാരത്തിൽ നിങ്ങൾ സംതൃപ്തനാണോ?					
3. മേലധികാരികളുടെ നിർദ്ദേശങ്ങളിലും നിയന്ത്രണങ്ങളിലും നിങ്ങൾക്ക് സംതൃപ്തിയുണ്ടോ?					
4. സഹപ്രവർത്തകരിൽനിന്നും കിട്ടുന്ന സഹകരണത്തിൽ നിങ്ങൾ സംതൃപ്തനാണോ?					
5. കിട്ടുന്ന ശമ്പളത്തിൽ നിങ്ങൾ സംതൃപ്തനാണോ?					
6. നിലവിലുള്ള പ്രമോഷൻ വ്യവസ്ഥകളിൽ നിങ്ങൾക്ക് സംതൃപ്തിയുണ്ടോ?					
7. ജോലിചെയ്യുന്ന സ്ഥലത്തുള്ള ലഭ്യമായ ഭൗതിക സൗകര്യങ്ങളിൽ നിങ്ങൾ സംതൃപ്തനാണോ?					
8. ജോലിസ്ഥലത്തുള്ള താമസ സൗകര്യത്തിലും വൈദ്യസഹായത്തിലും നിങ്ങൾ സംതൃപ്തനാണോ?					
9. സംതൃപ്തമായ രീതിയിൽ, കുടുംബ നിർവ്വഹണത്തിൽ ശ്രദ്ധയും, ശുഷ്കാന്തിയും കാണിക്കാനും സമയം ചെലവഴിക്കാനും നിങ്ങൾക്ക് സാധിക്കുന്നുണ്ടോ?					
10. ജോലി ഭാരത്തിൽ നിങ്ങൾ സംതൃപ്തനാണോ?					
11. കുടുംബ ലക്ഷ്യങ്ങളനുസരിച്ച് കൈവരിക്കുന്ന പുരോഗതിയിൽ നിങ്ങൾ സംതൃപ്തനാണോ?					
12. ഈ ജോലിയിൽ നിങ്ങളുടെ കഴിവുകൾ സംതൃപ്തമായ രീതിയിൽ പ്രകടിപ്പിക്കുവാൻ കഴിയുന്നുണ്ടോ?					

താഴെ കൊടുത്തിരിക്കുന്ന ചോദ്യാവലി പൂരിപ്പിക്കുക:-

1. വയസ്സ് (പൂർത്തിയാക്കിയ വർഷം)

2. പരിചയം (പൂർത്തിയാക്കിയ വർഷം) — പിരിയഡ്.

   എ. ഇപ്പോഴത്തെ തസ്തികയിലുള്ള പരിചയം.

   ബി. മുൻപ് ജോലി ചെയ്തിരുന്ന തസ്തികയിലുള്ള പരിചയം.

3. വിദ്യാഭ്യാസ യോഗ്യതകൾ:

   എ. എസ്.എസ്.എൽ.സി. വരെ ( )

   ബി. പ്രീ-ഡിഗ്രി/ഇന്റർമീഡിയറ്റ്/ ഡിപ്ലോമാ. ( )

   സി. കാർഷികബിരുദം ഒഴികെയുള്ള ഡിഗ്രികൾ. ( )

   ഡി. കാർഷിക ബിരുദം. ( )

   ഇ. ബിരുദാനന്തര ഡിഗ്രി. ( )

4.

പങ്കെടുത്ത ട്രെയിനിംഗുകൾ. ടി ആന്റ് വി ട്രെയിനിംഗ് ഒഴിച്ച്.	പങ്കെടുത്ത കാലയളവ്.	എത്ര തവണ ഓരോന്നിലും പങ്കെടുത്തു.
എ. പ്രീ-സർവ്വീസ്/ഇൻഡക്ഷൻ/ ഓറിയന്റേഷൻ ട്രെയിനിംഗ്.		
ബി. ഇൻ-സർവ്വീസ് ട്രെയിനിംഗ്.		

5. ടി ആന്റ് വി യിൽ കിട്ടുന്ന ട്രെയിനിംഗ് കൂടുതൽ ഫലപ്രദവും ഉപയുക്തവും ആക്കുന്നതിന്, നിങ്ങളുടെ നിർദ്ദേശങ്ങൾ എന്തൊക്കെയാണ്?

നന്ദിപൂർവ്വം.

...

ABSTRACT

The study was undertaken in Neyyattinkara (Trivandrum district), Adoor (Quilon district) and Mavelikkara (Alleppey district) sub-divisions in order to evaluate the training programmes conducted under T & V system. Objectives of the study were the following.

1. To analyse the major training components, namely, the trainer, the trainee and the subject matter and other related components within the T & V system.
2. To study the perception and performance of these training components by the trainees towards achieving effective training programmes within the T & V system.
3. To analyse the methodology of training and the transfer of technology within the T & V system as perceived and employed by the trainees.
4. To find out the relationship between the perception and performance of the trainees with their personal characteristics.

The study revealed that the T & V officials of Mavelikkara, Adoor sub-divisions viz., AD, JAO, SMS, SDAO were found to have better perception of Training Methodology and Transfer of Technology than their counterparts in Neyyattinkara sub-division. Where as the DSMS of Trivandrum was found to be better in perception of the two major concepts than his counterparts in other two districts. In the same context, the JDAs of all the three districts found to be on par in their perception.

In the perception of sub-concepts of Training Methodology and Transfer of Technology also the ADs and JAOs of Mavelikkara and Adoor sub-divisions had better perception. The officials above JAO in Quilon district perceived majority of the sub-concepts better than their counterparts of other districts.

The T & V officials of both Quilon and Alleppey districts had perceived their job higher and performing it better than their counterparts in Trivandrum district. Among the different categories of T & V personnel ADs and JAOs were found to be the personnel having least perception, where as JDAs and SMS had the highest perception of the sub-concepts of Training Methodology and transfer of technology.

Significant positive relationship was established between perception on job by ADs, JAOs and SMS and their performance. Of the five independent variables studied, age and experience were found to have positive relationship with the perception and performance by ADs, JAOs and SMS. Where as 'Trainings acquired' by JAOs was found to have influence on their perception of Training Methodology and Transfer of Technology. The same variable was found to have positive influence on the performance of ADs and JAOs. Job satisfaction of ADs and SMS was found to have influence on their perception of the two major concepts of the T & V system. The job perception of ADs and JAOs and the performance of ADs and SMS were influenced by their job satisfaction.