

**EFFECTIVENESS OF INSTRUCTOR  
CONTROLLED INTERACTIVE VIDEO (ICIV)  
IN DISSEMINATION OF FARM TECHNOLOGY**

**By  
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**THESIS**

**Submitted in partial fulfilment of the  
requirement for the degree of**

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**Faculty of Agriculture  
Kerala Agricultural University**

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COLLEGE OF HORTICULTURE  
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KERALA, INDIA**

**2000**

## DECLARATION

I hereby declare that this thesis entitled “**Effectiveness of Instructor Controlled Interactive Video (ICIV) in dissemination of farm technology**” is a bonafide 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, fellowship or other similar title, of any other University or Society.

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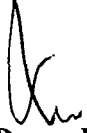
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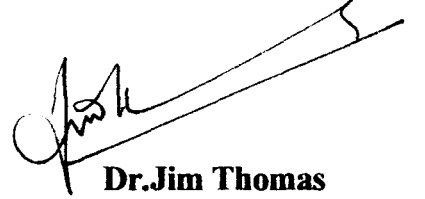
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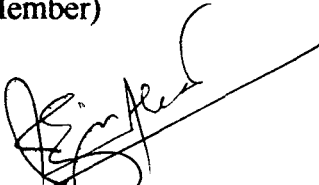
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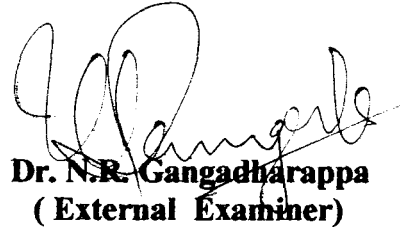
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## CONTENTS

Chapter	Title	Page No.
1	INTRODUCTION	1
2	THEORETICAL ORIENTATION	6
3	RESEARCH METHODOLOGY	21
4	RESULTS	35
5	DISCUSSION	49
6	SUMMARY	60
	REFERENCES	
	APPENDIX	
	ABSTRACT	

## **LIST OF TABLES**

Table No.	Title	Page No.
1	Distribution of respondents based on selected variables with regard to profile characteristics of respondents	36
2	Distribution of respondents based on knowledge gain and symbolic adoption after ICIV	37
3	Simple correlation analysis of knowledge gain after ICIV	39
4	Results of multiple regression analysis of knowledge gain after ICIV	40
5	Simple correlation analysis of symbolic adoption after ICIV	42
6	Results of multiple regression analysis on symbolic adoption after ICIV	43
7	Analysis of variance of different treatments of ICIV in terms of knowledge gain	44
8	Analysis of variance of different treatments of ICIV in terms of symbolic adoption	44
9	Mean values of respondents knowledge level before and after each treatment	45
10	Mean values of respondents symbolic adoption after each treatment	46



## LIST OF ILLUSTRATION

Fig. No.	Title	Page No.
1	Conceptual frame work of the study	20
2	Map showing the location of the study	22
3	Distribution of respondents based on knowledge gain after ICIV	38
4	Distribution of respondents based on symbolic adoption after ICIV	38
5	Effectiveness of different treatments of ICIV in terms of knowledge gain	47
6	Effectiveness of different treatments of ICIV in terms of symbolic adoption	48
7	Empirical model of the study showing the relationship between selected independent variables and knowledge gain after ICIV	58
8	Empirical model of the study showing the relationship between selected independent variables and symbolic adoption after ICIV	59

# *Introduction*

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## INTRODUCTION

“Any sufficiently advanced technology is indistinguishable from Magic”

- Arthur C. Clarke

Increasing agricultural production is of prior importance in most of the developing nations. Limited resources and the mounting population pressures have essentially directed us towards the concept of ‘intensive agriculture’. It is in this scenario that effective dissemination of farm technologies becomes a critical input in maximising agricultural production. The potential power and strength of the mass media particularly television is widely recognised towards this endeavour.

Television is a highly influential medium which has not left any area of human life untouched. Through television it is possible to carry the information in different forms such as speech, music, gestures, sound effects, diagrams, pictures etc. and thus enables the learner to learn effectively. Nonetheless, the mass appeal commanded by this media and its ability to reach larger audience at a lower cost has always been glorified.

Yet, this powerful medium has its own limitations. Being a mass media, television fails to cater the cognitive needs of the individual to the fullest extent. Furthermore, the heterogeneity of the mass audience, lack of feed back, nonavailability of interpersonal contact and the urban bias have disarmed this medium, to be used for effective communication of technologies.

Today, is the day of information technology (IT) where the electronic media had embarked as the media of the 21<sup>st</sup> century. It is right to point out here that video has an immense potential for being used as an useful instructional electronic media.

Video is the 'medium of motion' which can be more effective for relating one idea to another, for building continuity of thoughts and for creating a dramatic impact. It is well known that visual impact occurs through manipulation of visual media forms - size, colour, texture, balance, motion etc. Video can very well blend and reformat these elements to achieve specific visual objectives.

Likewise, video can combine both the still and moving images and make the visuals much impressive. Video offers several other advantages over other media like that it is **recyclable** (can be used many times), its **immediacy** of being able to use immediately after recording, its **flexibility** (that it can be upgraded) and its easy **content manipulation** (Prabhakar, 1996).

As a group media, it is wholly appropriate to use video in 'micro teaching'. No other communication form can embody within it as many audio and visual components. When artfully combined and articulated, the impact of video on the receiver is unparalleled.

Education Commission (1964-65) and All India Conference on Agricultural Education (1969) strongly recommended the use of appropriate method in teaching - learning process. Primarily, teaching - learning process is as such incomplete, when it fails to involve interaction in it.

Being highly technical, the unsavoury experience of using computer based interactive video demands lot of expertise on the part of the user. However, majority of Indian farmers still struggling with illiteracy, it is impossible for them to cope up with such an hi-tech media. It is in this context, Instructor Controlled Interactive Video (ICIV) comes to lime light. Here, the instructor can replace the computer who promotes interaction with the audience and also controls the video programme, which can be stopped at any time for further discussion and clarification.

This study is aimed at evolving the effectiveness of such Instructor Controlled Interactive Video in disseminating farm information. Moreover, the ICIV was treated with different video formats so as to establish its edge over other modes of presentation. Keeping all this in mind, the study was designed with the following specific objectives:

1. To assess the knowledge gain through Instructor Controlled Interactive Video.
2. To assess the symbolic adoption of the viewers.
3. To relate situational and psychological variables of the farmers (particularly farm women) towards the effectiveness of ICIV.

4. To assess the relative efficiency of different video formats in ICIV.

### **Scope of the study**

In this modern era of electronic communication, video has got a great value to be used as an effective media in group situations. It can display pictures on television type screen, which can also be retrieved as and when required. The edge of this medium to show processes and operations with desired visual effect has made it more appropriate for disseminating new agricultural technologies among farmers effectively.

When compared to video, the Instructor Controlled Interactive Video could facilitate the viewers to clarify the doubts through interaction thereby increase their knowledge about the new technology in an effective manner. Moreover, the intention of this endeavour to establish the relative effectiveness of different video formats will help a long way in using the appropriate video format during tele presentations.

### **Limitations**

The constraints like resources, sample size, time, mobility etc. normally encountered by an academic researcher are not ruled out in this study also. Moreover, this study was confined to one Grama Panchayath of the district, the results of which are difficult to generalise. With these limitations, maximum effort was made to make the study more suitable to fulfil the objectives.

## **Organisation of the thesis**

The thesis is presented in five chapters including the present one. The introductory chapter also includes the objectives, scope and limitations of the study.

The second chapter deals with the review of literature found relevant to the present study. The third chapter includes the details of the study area, selection of respondents, procedures for development of indices, selection and operationalisation of dependent and independent variables, tools used for data collection and statistical techniques followed.

The findings of the study are given in the fourth chapter and the fifth chapter covers the discussion of the results obtained.

The sixth and the final chapter furnishes the summary and conclusion of the study and its implications. The relevant references, appendices and the abstract of the thesis are given at the end.

## **THEORETICAL ORIENTATION**

Retrospection of the past is of immense help to understand the present. Any scientific endeavour becomes more clear, concrete and laudable when it is supported by pertinent studies conducted earlier in that regard. Keeping this in mind, a comprehensive review of the previous research studies related to the topic has been presented in this chapter under the following sub heads:

- 2.1 Effectiveness of video programmes
- 2.2 Effectiveness of Interactive video
- 2.3 Preference towards modes of presentation
- 2.4 Effectiveness in terms of knowledge gain
- 2.5 Effectiveness in terms of symbolic adoption
- 2.6 Variables and their association
- 2.7 Conceptual framework of the study

### **2.1 Effectiveness of video programmes**

Tanwar (1984) found that VCR could be used as an effective tool to train farmers of Krishi Vigyan Kendras, Farmer's Training Centres and can also be used under the Training and Visit system of extension for training extension functionaries and farmers.

Margaret (1988) conducted a study on dissemination of agricultural information through television in Trinidad and Tobago. The results portrayed



that there was significant improvement in the correct number of responses got after the exposure to the television programme. The television programme undoubtedly was responsible for the increase in agricultural knowledge of this group.

Ronald (1991), while studying the academic performance of video based distance education students and on-campus students revealed that there was no significant difference in the academic performance between the two groups of students.

According to Singh (1991), video, which is mainly used as an entertainment medium now, has a great potential to be used for educational purposes too. One main advantage of video is that it can be used to produce developmental programmes at a very cheap rate as compared to preparation of television films.

While assessing the effectiveness of video education programmes in promoting mushroom cultivation and bee-keeping enterprises, Ravichandran (1992) opined that there was a significant increase in knowledge level at post exposure stage compared to pre-exposure stage of video programmes.

Arul (1992) stated that the learning capacity of the learners had increased through the video programmes because the learners could repeatedly play back the programmes to suit their learning capacity.

According to Mruthyunjayam (1993), video attracts and holds the attention of the receiver (may be farmers (or) extension workers). Complicated procedures / technologies can very well be demonstrated through video and can also be supplemented with other teaching materials.

Reddy (1993) emphasized that a video programme can show both motion and colour. He further stated that information can be given in a visually effective way by using moving images, music, sound effects and graphics. Moreover, information traditionally presented in the form of booklets and handouts can become more effective when rendered through video.

Highlighting the lack of tailor-made video programmes to support the work of extension practitioners at local level in Pakistan, Brummelman *et al.* (1995) underscored that video can be effectively used in promoting client oriented agricultural development projects.

Damms and Stone (1995) assessed the role of video in agricultural communication in United Kingdom. They revealed that around 89 per cent of the farmer respondents were interested in video programmes on technical topics. Interestingly, a majority of them were even prepared to pay for such programmes.

Significant increase in the consumption of Broccoli was witnessed among the participants who viewed video programmes on the subject, in California, as reported by Joy and Fujii (1995).

In his recent study on effectiveness of video among different clientele groups, Viswanathan (1997) reported that video is very effective in imparting knowledge. Accordingly, extension administrators and trainers can effectively utilize the video medium for successful transfer of technology.

## **2.2 Effectiveness of Interactive video**

Instructor controlled interactive video (ICIV) is nothing but a video programme with the facility to provide further clarification to the participants through an expert / instructor (Selvaraj, 1997).

According to Donna (1986), video assisted instruction was as effective as live instruction, in terms of positive gain in learner's attitude towards mathematics.

Dhanabagam (1989) studied the effect of video assisted instruction on pupils achievement and attitude towards learning in Botany at higher secondary school level. This study concluded that video assisted teaching method was far better than the conventional method of teaching.

Balasubramanian and Enigo (1994) in their study had revealed that Instructor controlled Interactive Video was more effective in modifying the cognitive behaviour among farmers when compared to lecture method and conventional non-interactive video. Furthermore, they also concluded that Interactive Video is not appropriate for developing countries like India and Pakistan, where group learning system is found to be more useful. In such

cases, ICIV can prove more superior by promoting group interaction and learning.

Balasubramanian *et al.* (1995) attempted to study the effectiveness of Instructor Controlled Interactive Video programme over conventional non-interactive video programmes. Here, they found that ICIV was more effective when compared to other group communication strategies. The study also revealed the dominance of ICIV in modifying the cognitive behaviour at knowledge, understanding and application levels.

While examining the effectiveness of interactive video instruction on teacher's classroom management in USA, Sariscsany and Pettigrew (1997) stated the interactive video training programme to be an effective method for developing classroom management knowledge when compared to traditional teaching methods.

In the same line, Selvaraj (1997) asserted that Instructor Controlled Interactive Video could be effectively used among farmers as an instructional medium so as to increase their knowledge on new technologies in agriculture and allied sectors.

### **2.3 Preference towards modes of presentation**

While analysing the impact of television on farmers, Mishra and Sharma (1967) underscored that majority of the viewers (respondents) preferred programmes which were supported by discussions and illustrations.

Highlighting the importance of specialists in presenting agricultural programmes, Sekhon (1970) revealed that 54 per cent respondents wanted specialists with farmers to present agricultural programmes because they would be more experienced, interesting, impressive and clear.

Giving the same view, Sharma and Dey (1970) noted that respondents preferred 'talks with illustrations' than the 'straight talk' mode. He also said that audience emphasized the inclusion of subject matter specialist (SMS) and experienced farmers while presenting agricultural programmes.

Abraham (1981) proposed that presentation with rural songs was the most preferred mode for telecast of rural farm programmes. Other preferred modes in order of sequence were discussion with farmers, discussion with experts and straight talk.

In contrast, Lakshmanan (1982) underscored that more than half of the respondents wanted the farm television programmes purely with technical information rather than mixing with songs or other items.

Exploring the suggestions of farm televiewers towards the improvement of farm telecast from Doordarshan, Sastry (1986) pointed out that cent per cent viewers of 'Palu-chelu' farm telecast preferred features and dramatic versions with appropriate background music.

A study conducted on rural viewers by Pillai *et al.* (1987) indicated that half of the respondents were inclined towards demonstration technique of telepresentation.

Assessing viewer's reaction towards farm television programmes, Singh and Hansra (1987) emphasized that almost 98 per cent of the respondents preferred interview mode of presentation supported by appropriate aids. The other usual modes, demonstration and discussion were ranked second and third respectively.

Rathakrishnan (1988) stated that discussion with farmers was the most preferred mode followed by presentation with rural songs and discussion with experts.

Demonstration by experts supplemented with discussion was the more useful and practical mode identified during the 'Nattinpuram' farm programme of Doordarshan Kerala, Thiruvananthapuram as established by Rose (1990).

Selvaraj (1990) inferred that dramatical treatment was the best choice for advocating farm technologies through video. Discussion and documentary were the other preferred modes by farmers.

While illustrating the importance of 2D and 3D visuals, Philip (1995) opined that video programmes treated with 2D and 3D visuals have shown significant knowledge gain, knowledge retention and skill acquisition. Worth to

note, he also proclaimed that interview mode of presentation was more favoured by farmers as compared to the straight talk mode.

#### **2.4 Effectiveness in terms of knowledge gain**

In USA, while analysing the diffusion of knowledge about dairy cattle feeding through television, Alexandar (1963) asserted that there was significant increase in knowledge of farmers about the message, when taught through television.

Sekhon (1968) found that there was 45 to 62 per cent increase in knowledge of farmers due to farm telecasts. Ultimately, he underscored that television can be effectively used as a useful communication media for imparting scientific know-how to farmers.

In a comparative analysis of radio and television towards their endeavour in disseminating agricultural information, Dey and Sharma (1970) found that TV was far superior than radio with respect to knowledge gain of farmers.

Illustrating a 15 minute video cassette experiment, Kristiansson (1976) observed video to be an excellent teaching tool for promoting learning among the participants.

Critical analysis of farm telecast programmes by Mruthyanjayam (1987) revealed the significant gain in knowledge level of respondents on the

message, after they witnessed three farm tele-programmes on rice, maize and groundnut.

In the same line, Rathakrishnan (1988) pointed out the occurrence of medium to high level knowledge gain among majority of viewers.

While assessing the effectiveness of three selected modes of video exposure namely documentary, discussion and drama, Selvaraj (1990) concluded that all the three modes caused significant increase in knowledge level of the respondents. He also added that drama was more successful in promoting knowledge gain among the viewers compared to discussion and documentary.

Singh (1992) portrayed some probable reasons for effective knowledge gain through video learning. They are:

- \* Message through video reaches the mind of the audience both through eyes and ears simultaneously
- \* Video enables the viewers to see objects and procedures clearly, which may be too small to be visible in group situations
- \* It easily brings events and activities from outside world to the classroom
- \* It provides entertainment along with education.

Reddy and Mruthyunjayam (1994) stated that there was significant gain in knowledge among farmers as a result of viewing farm telecast.



In his study Rathakrishnan (1988) proclaimed that one-third of televiewers symbolically accepted to adopt technologies on Integrated Farming System. Further, he added that more complex technologies when telecasted had very low symbolic adoption rate.

Reghupathi (1989) identified a significant increase in the symbolic adoption of mushroom growers after viewing the farm telecast on the subject.

Drama was more effective when compared to other modes of presentation through video in bringing about high symbolic adoption among the viewers, as opined by Selvaraj (1990).

Sensitizing the influence of video education programmes on rural women, Ravichandran (1992) pointed out that 88 per cent of the participants symbolically adopted the practice taught through video.

Ahmed (1998) established that symbolic adoption status was more than 50 per cent in case of farm women trainees on layer farming.

## **2.6 Variables and their association**

### **2.6.1 Education**

According to Potti (1960), education had a close positive relationship with response to extension teaching.

As quoted by Bhaskaran (1968), better response to knowledge gain was seen among the farmers with higher level of education.

Advocating video as a tool to promote knowledge gain among farm women, Pandiyan (1999) remarked a significant relationship between education and knowledge gain of farm women.

#### 2.6.2 Area under vegetables

Selvaraj (1990), Philip (1995), Selvaraj (1997) and Viswanathan (1997) established a positive relationship between farm size and knowledge gain after viewing farm programmes through video. Selvaraj (1997) also pointed out a significant association between farm size and symbolic adoption.

As against these findings, a negatively significant association was revealed by Rathakrishnan (1988), Jeyasubramanian (1996) and Pandiyan (1999).

#### 2.6.3 Economic motivation

Philip (1995) and Ahmed (1998) reported that economic motivation had a positive relationship with knowledge gain and symbolic adoption while Subramanian (1991) pointed no association between these.

#### 2.6.4 Innovativeness

While testing the influence of farm telecast on knowledge gain and symbolic adoption of mushroom cultivators Raghupathi (1991) found a positive significant relationship between innovativeness and knowledge gain.

Similarly, Ahmed (1998) also stated that innovativeness and knowledge gain had a positive and significant association.

2.6.5 Scientific orientation, Achievement motivation, Level of aspiration, Socially responsible audience behaviour (SRAB), Need for cognition (NFC), Polychronic attitude (PCA), and Self esteem.

Since these psychological variables were very new to the present research endeavour, the researcher could not dig out any related previous studies showing their association.

## **2.7 Conceptual framework of the study**

The aim of conceptual framework developed is to provide an abstract view of knowledge gain and symbolic adoption of the respondents after participating in ICIV. The relationship and contribution of the selected independent variables covering psychological and situational of factors of the respondents towards the effectiveness of ICIV is also visualised in the framework.

The influence of the psychological and situational factors on the dependent variables namely, knowledge gain and symbolic adoption is conceptualised in this framework. Moreover, the effectiveness of ICIV is also influenced by different treatments i.e., different video formats used during the presentation. A comprehensive view of all these factors would make the present study lucid clear towards idealising the effectiveness of ICIV as an useful instructional media.

# *Research Methodology*

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## **RESEARCH METHODOLOGY**

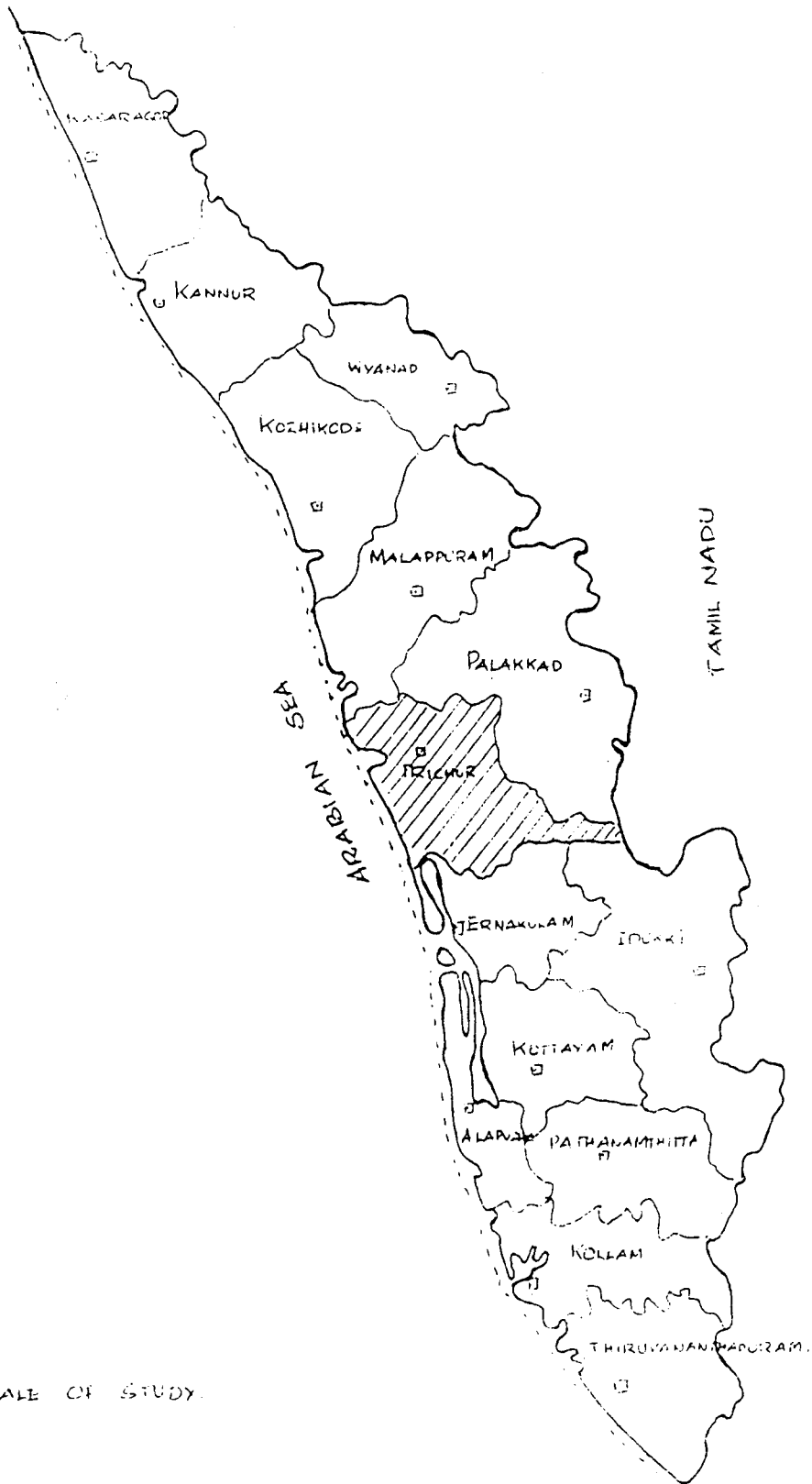
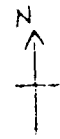
"Discoveries cannot be planned, work must be planned, if it is lead to discoveries"

Tripathi.

All researches begin with the preparation of a research design. This chapter intends to explain the overall blue print of the research programme adopted here, to discover the effectiveness of ICIV. The details of the research techniques followed have been presented in the following sub-heads:

- 3.1      **Locale of the study**
- 3.2      **Selection of sample**
- 3.3      **Research design**
- 3.4      **Production of video programme**
- 3.5      **Selection of variables**
- 3.6      **Operationalization and measurement of variables**
- 3.7      **Methods used for data collection**
- 3.8      **Statistical tools used**
  
- 3.1      Locale of the study**

As the present study is a pioneering effort of its kind in the state of Kerala, it becomes very essential to identify an appropriate study area to conduct the research. Consequently, Ollukkara Block panchayath in Thrissur district was selected for the very reason that it was one among the blocks



▣ LOCALITY OF STUDY

Fig 2(a) MAP OF KERALA SHOWING THRISSUR DISTRICT

having highest area under vegetable cultivation in the district. Moreover, vegetable farmers in Thrissur district receive adequate support from the Kerala Horticulture Development Programme (KHDP) which is implemented in full swing throughout the district and also from the Kerala Agricultural University (KAU) located in the district. From Ollukkara Block, five groups of farmers (farm women) were selected from Nadathara Grama panchayath, based on the involvement in vegetable growing in homesteads and success of Haritha groups under the Intensive Vegetable Production Programme of the State Department of Agriculture.

### **3.2 Selection of sample**

From the selected study area, 150 vegetable growers were randomly chosen to be the respondents for the study. All the respondents were farm women growing vegetables. Sensitising the increasing role of farm women in vegetable farming particularly in homestead conditions, they were selected to be respondents for the study. Then, these 150 respondents were grouped into five clusters of 30 each based on geographical convenience. Selection of subjects for each cluster was achieved by adopting the purposive random sampling technique.

### **3.3 Research design**

The study was conducted with an experimental research design with before and after treatments of the identified stimuli.

<u>Number</u>	<u>Treatment</u>
T <sub>1</sub>	Features (video) + Discussion
T <sub>2</sub>	Panel discussion (video) + Discussion
T <sub>3</sub>	Skill demonstration (video) + Discussion
T <sub>4</sub>	Interview (video) + Discussion
T <sub>5</sub>	Control (Discussion alone)

The respondents were introduced to the concept of IPM in vegetables through video in different formats. During each session/treatment, discussion was promoted between the viewers and the subject matter specialists (SMS), who were plant protection experts from the field of Agricultural Entomology and Plant Pathology.

Before and after each treatment, data were collected on the major dependent variables namely knowledge level and symbolic adoption. Gain in knowledge was assessed by obtaining the difference between the knowledge levels at pre exposure and post exposure stages of ICIV. Effectiveness of the different video formats was also interpreted by comparing each treatment with the other.

### **3.4 Production of video programme**

'Optimising yield rather maximising it' is the thought of the day and Integrated Pest Management (IPM) is a genuine attempt towards that. Though this multidisciplinary approach appears simple in theory, it is rather difficult to



technology dissemination in various Agricultural Universities in India. They were asked to rate the relevancy of each variable on a three-point continuum of most relevant, relevant and least relevant with weightages of 3, 2 and 1 respectively.

Out of 60 judges, 30 responded with complete responses to the items. The total score obtained by each independent variable was calculated. Then the variables were ranked based on the percentage score obtained by each of them compared to that of the maximum obtainable score of a variable.

Some of the highly relevant variables as rated by the judges were selected for the final list. Apart from this, a discussion with the scientists from the related area gave rise to some more important variables seemingly relevant for the study. Incorporating all these, a final list of 11 independent variables was prepared.

Knowledge gain and symbolic adoption were the two dependent variables selected for the study. The review of the past literature revealed the significant association between some of the selected independent variables and the dependent variables.

### **3.6 Operationalization and measurement of variables**

The selected 11 independent variables and two dependent variables were operationalised and procedures followed to measure them are presented here.

### 3.6.1 Independent variables

#### 3.6.1.1 Education

Here, education was measured using the scale of Trivedi (1963) with slight modification. The categories of respondents and their corresponding scores assigned were as given below.

<b>Category</b>	<b>Score</b>
Primary	1
Upper primary	2
High school	3
Pre-degree	4
Degree/More	5

#### 3.6.1.2 Area under vegetables

It was operationalised as the area under vegetable farming and was measured in cents.

#### 3.6.1.3 Economic motivation

Economic motivation was operationalised as the extent to which an individual is oriented towards achievement of the maximum economic ends.

The scale developed by Supe (1969) with slight modification was used for the study. The scale consisted of four statements which were suggested to respondents in the following three point continuum.

<b>Category</b>	<b>Score</b>
Agree	3
Undecided	2
Disagree	1

The total score was realised by summing up the score for statement.

#### 3.6.1.4 Innovativeness

This was operationalised as the degree to which the respondent is relatively earlier in adopting new ideas.

The scale developed by Singh (1977) was adopted with required modifications so as to suit the present study. The modified scale contained four statements aimed to explore the innovativeness of the farmer respondents. Based on the responses, scores were assigned for each statement. The scoring pattern followed is given below.

<b>Category</b>	<b>Score</b>
Always	3
Sometimes	2
Never	1

### 3.6.1.7 Level of aspiration

Level of aspiration referred to the farmer's overall assessment of his concern for wishes and hopes for the future, in his own reality world.

Level of aspiration was measured using the scale developed by Muthayya (1971) with required modifications for the present study. The scale consisted of three statements with three alternative responses for each statement. Relative weights of 1, 2, 3 were assigned for the three alternatives. The scores obtained for each item was summated to get the score on level of aspiration. The possible score range was 3 to 9.

### 3.6.1.8 Socially responsible audience behaviour (SRAB)

Socially responsible audience behaviour is operationally defined as those behaviour and decisions of the audience which are motivated not only by a desire to satisfy personal needs, but also by a concern for the welfare of the society.

Here, SRAB was measured using an arbitrary scale developed for the purpose, which constituted five statements. Out of five statements, four were positive and one was negative. Each statement had five alternative responses ranging from strongly agree to strongly disagree, with relative weights from 5 to 1 respectively. The respondent's score on each item was added up to get his overall score for the variable.

### 3.6.1.9 Need for cognition (NFC)

Need for cognition was operationally defined as the tendency of the individuals to engage in and enjoy thinking.

An arbitrary scale consisting of four statements was developed to measure the variable. For each statement, responses ranged from strongly agree to strongly disagree and for which the scores assigned were from 5 to 1 respectively. The summation of the score on each statement gave the score of the respondent for the variable.

### 3.6.1.10 Polychronic attitude (PCA)

Polychronic attitude is operationalised as the mental disposition of the farmer in terms of combining activities such that several goals can be attained at the same time.

It was measured using a scale developed arbitrarily for the purpose. The scale consisted of five statements and each statement had five alternative responses. Relative weights of 5 to 1 were assigned the responses and the scores were computed accordingly.

### 3.6.1.11 Self esteem

Self esteem means the evaluation which the individual makes and customarily maintains with regard to himself. It expresses an attitude of approval or disapproval.

Self esteem was measured using the scale developed by Thomas and Sanandaraj (1983). The scale consisted of five statements, of which three were positive and other two were negative. Responses ranged for strongly agree to strongly disagree on a five-point continuum with scores from 5 to 1 respectively. Negative statements were scored in reverse and the score of the respondent was got by adding up the scores for each statement.

### 3.6.2 Dependent variables

#### 3.6.2.1 Knowledge gain

Knowledge gain was operationalised as the quantum of information or message newly learnt by the vegetable farmer after the exposure to ICIV on IPM in vegetables.

Presently, the gain in knowledge was measured using the procedure used by Sureshkumar (1994). A teacher made test comprising 10 statements with a dichotomous response of True/False was prepared based on the review of past studies related to the topic and discussion with the experts. The scores of one and zero were assigned to correct and incorrect responses respectively and the total number of correct answers gave the total score of knowledge level. The difference between the knowledge levels before and after each treatment gave the gain in knowledge of the farmer.

### 3.6.3.2 Symbolic adoption

Symbolic adoption was operationally defined as the positive decision by the individual to mentally accept and adopt a technology, if provided with a chance to do it. This symbolically represented the adoption behaviour of that individual.

Here, symbolic adoption was measured following the procedure used by Ramkumar (1987). To quantify symbolic adoption, the farmer was administered with a set of eight questions, dealing with practices on IPM in vegetables. They were asked to respond whether they will adopt or not adopt the technology / practice, if a chance is given. Positive and negative responses were given scores of one and zero respectively. Summation of the scores of all the eight items, gave the symbolic adoption score of the respondent. The possible score ranges from zero to eight.

## 3.7 Methods used for data collection

After a thorough discussion with experts and in-depth perusal of the related literature, a structured questionnaire was developed covering all the variables of the study. Then, this questionnaire was translated to Malayalam and administered to the respondents. Data were collected separately both before and after the end of each treatment in the group meetings organised for the purpose of the study. This created space for assessing the knowledge gain and symbolic adoption after exposure to ICIV. The treatments were given with

the help of IPM experts (Scientists) and the prepared modules of different video formats on the same message. The respondents were exposed to the respective video format (treatment) followed by interaction with the experts, keeping the duration constant in all the treatments as well as control.

### **3.8 Statistical tools used**

The following statistical tools were used in the present study.

- 1) Percentage analysis
- 2) Correlation analysis
- 3) Multiple regression analysis
- 4) Analysis of variance
- 5) 't' test of significance



## *Results*

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## RESULTS

The major findings of the experimental study are furnished under the following headings:

- 4.1 Distribution of respondents based on selected variables with regard to profile characteristics of respondents
  - 4.2 Distribution of respondents based on knowledge gain and symbolic adoption after ICIV
  - 4.3 Influence of selected profile characteristics of respondents on their knowledge gain after ICIV
  - 4.4 Influence of selected profile characteristics of respondents on their symbolic adoption after ICIV
  - 4.5 Effectiveness of different video formats in ICIV
  - 4.6 Impact of ICIV in terms of knowledge gain and symbolic adoption on IPM in vegetables
- 
- 4.1 Distribution of respondents based on selected variables with regard to profile characteristics of respondents**

Distribution of respondents based on the selected independent variables have been obtained with percentage analysis, which are furnished below.

**Table 1. Distribution of respondents based on selected variables with regard to profile characteristics of respondents**

n = 150

Sl. No.	Items	Category	Score	Frequency	Per cent
1	Education	High	2.91 and above	123	82
		Low	<2.91	27	18
2	Area under vegetables	High	1.73 and above	64	43
		Low	<1.73	86	57
3	Economic motivation	High	11.12 and above	89	60
		Low	<11.1	61	40
4	Innovativeness	High	7.12 and above	58	39
		Low	<7.12	92	61
5	Scientific orientation	High	15.24 and above	86	57
		Low	<15.24	64	43
6	Achievement motivation	High	14.53 and above	76	51
		Low	<14.53	74	49
7	Level of aspiration	High	6.41 and above	70	47
		Low	<6.41	80	53
8	Socially responsible audience behaviour (SRAB)	High	19.62 and above	107	71
		Low	<19.62	43	29
9	Need for cognition (NFC)	High	11.90 and above	96	64
		Low	<11.90	54	36
10	Poly chronic attitude (PCA)	High	14.21 and above	77	52
		Low	<14.21	73	48
11	Self esteem	High	16.72 and above	82	55
		Low	<16.72	68	45

Considering the dimension of selected independent variables, this distribution shows that majority of the respondents were in high category regarding education (82%), economic motivation (60%), scientific orientation (57%), achievement motivation (51%), socially responsible audience behaviour (71%), need for cognition (64%), poly chronic attitude (52%) and self esteem (55%).

In case of innovativeness (61%), level of aspiration (53%) and area under vegetables (57%), majority of respondents were in low category.

#### 4.2 Distribution of respondents based on knowledge gain and symbolic adoption after ICIV

The distribution of respondents based on knowledge gain and symbolic adoption of integrated pest management practices in vegetable cultivation is expressed in frequency and percentage. The results obtained are given below.

Table 2. Distribution of respondents based on knowledge gain and symbolic adoption after ICIV

n = 120

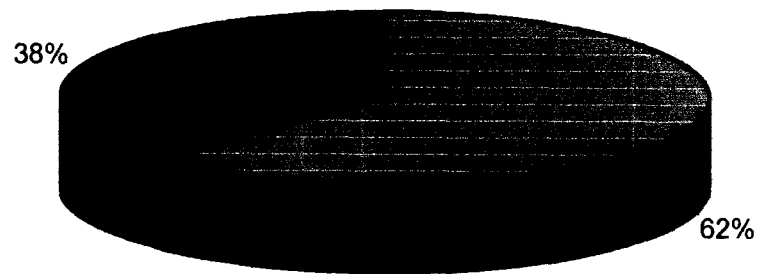
Sl. No.	Items	Category	Score	Frequency	Per cent
1	Knowledge gain about IPM in vegetables after ICIV	High	2.2 and above	74	62
		Low	< 2.2	46	38
2	Symbolic adoption of IPM in vegetables after ICIV	High	6.9 and above	85	71
		Low	<6.9	35	29

Distribution of respondents based on knowledge gain showed that 62 per cent of them were in high category (Fig.3). With regard to symbolic adoption of IPM practices in vegetables, it is found that 71 per cent were in this category (Fig.4)

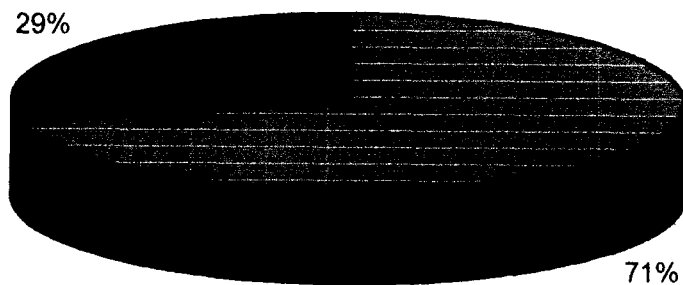
#### 4.3 Influence of selected profile characteristics of respondents on their knowledge gain after ICIV

The relationship of selected independent variables with knowledge gain through Instructor Controlled Interactive Video are presented in this section.

**Fig. 3 Distribution of respondents based on knowledge gain after ICIV**



**Fig. 4 Distribution of respondents based on symbolic adoption after ICIV**



■ HIGH

■ LOW

A set of 11 important independent variables related to profile characteristics of respondents were analysed to establish their relationship with the dependent variable i.e., gain in knowledge.

#### 4.3.1 Simple correlation analysis of knowledge gain after ICIV

The correlation coefficients worked out between knowledge gain and selected independent variables are depicted in table given below.

Table 3. Simple correlation analysis of knowledge gain after ICIV

n = 120

Sl. No.	Independent variables	Correlation coefficient
1	Education	0.052 <sup>NS</sup>
2	Area under vegetables	0.263 <sup>**</sup>
3	Economic motivation	-0.043 <sup>NS</sup>
4	Innovativeness	0.113 <sup>NS</sup>
5	Scientific orientation	0.256 <sup>**</sup>
6	Achievement motivation	-0.077 <sup>NS</sup>
7	Level of aspiration	0.090 <sup>NS</sup>
8	Socially responsible audience behaviour (SRAB)	0.195 <sup>*</sup>
9	Need for cognition (NFC)	0.261 <sup>**</sup>
10	Poly chronic attitude (PCA)	-0.234 <sup>*</sup>
11	Self esteem	-0.332 <sup>**</sup>

\* Significant at 5% level

\*\* Significant at 1% level

NS - Not significant

The results of the Table 3 reveals that six out of the total 11 independent variables had a significant relationship with knowledge gain. The variables such as area under vegetables, scientific orientation, socially responsible audience behaviour and need for cognition had positive and significant relationship with knowledge gain. Other psychological variables such as polychronic attitude and self esteem had significant negative

relationship with gain in knowledge. The other variables such as education, innovativeness and level of aspiration were positively related with knowledge gain but their relationship is not significant. Although a negative relationship was observed between knowledge gain and variables such as economic motivation and achievement motivation, this association was found to be not significant.

#### 4.3.2 Multiple Regression Analysis of knowledge gain after ICIV

The results of the multiple regression analysis of independent variables on the dependent variable knowledge gain through instructor controlled interactive video are presented in Table 4.

Table 4. Results of multiple regression analysis of knowledge gain after ICIV

Sl No.	Independent variables	Regression coefficient	Standard error	t value
1	Education	-0.1389	0.13358	-1.040 <sup>NS</sup>
2	Area under vegetables	0.34831	0.13465	2.787 <sup>**</sup>
3	Economic motivation	0.27168	0.008951	0.304 <sup>NS</sup>
4	Innovativeness	0.006799	0.004573	1.612 <sup>NS</sup>
5	Scientific orientation	0.33532	0.16496	1.972 <sup>*</sup>
6	Achievement motivation	-0.0022702	0.50042	-0.454 <sup>NS</sup>
7	Level of aspiration	0.30314	0.10975	2.382 <sup>*</sup>
8	Socially responsible audience behaviour (SRAB)	0.29221	0.17983	2.567 <sup>**</sup>
9	Need for cognition (NFC)	0.0079913	0.003214	0.263 <sup>NS</sup>
10	Poly chronic attitude (PCA)	0.0089913	0.003165	-0.146 <sup>NS</sup>
11	Self esteem	-0.15643	0.0039288	-3.982 <sup>**</sup>

\* Significant at 5% level

R square = 0.61772

\*\* Significant at 1% level

NS - Not significant

It could be observed from Table 4 that the R<sup>2</sup> value of 0.61772 explained the 61.7% variation in the dependent variable knowledge gain

through ICIV, as influenced by the 11 independent variables. Out of the eleven variables selected for analysis, four variables namely area under vegetables, socially responsible audience behaviour, scientific orientation and level of aspiration had been found positively contributing to the variation in knowledge gain of respondents with respect to IPM practices in vegetables. Interestingly, the variable self esteem was found to be negatively influencing the dependent variable. Other variables did not show any significant relationship with the knowledge gain through Instructor Controlled Interactive Video.

#### **4.4 Influence of selected profile characteristics of respondents on their symbolic adoption after ICIV**

Adoption is an independent decision of an individual. It is being influenced very much by his personality characters and situational factors.

##### **4.4.1 Simple correlation analysis of symbolic adoption after ICIV**

Correlation analysis of such independent variables with the dependent variable symbolic adoption reveals how far these variables influenced the adoption process. This is reported in the table given below.



Table 5. Simple correlation analysis of symbolic adoption after ICIV

n = 120

Sl. No.	Independent variables	Correlation coefficient
1	Education	0.044 <sup>NS</sup>
2	Area under vegetables	0.208*
3	Economic motivation	0.158 <sup>NS</sup>
4	Innovativeness	0.198*
5	Scientific orientation	0.261**
6	Achievement motivation	0.209*
7	Level of aspiration	-0.271**
8	Socially responsible audience behaviour (SRAB)	0.262**
9	Need for cognition (NFC)	-0.139 <sup>NS</sup>
10	Poly chronic attitude (PCA)	0.177 <sup>NS</sup>
11	Self esteem	-0.020 <sup>NS</sup>

\* Significant at 5% level

\*\* Significant at 1% level

NS - Not significant

Table 5 reveals that, five independent variables namely scientific orientation, socially responsible audience behaviour, area under vegetables, innovativeness and achievement motivation had positive significant relationship with the dependent variable symbolic adoption. The variable, level of aspiration showed a negative and significant relationship with symbolic adoption. No significant relationship was noticed between the remaining five variables and symbolic adoption of IPM practices in vegetables through ICIV.

#### 4.4.2 Multiple regression analysis of symbolic adoption after ICIV

The variation in symbolic adoption caused by the influence of the selected 11 independent variables is explained in the Table 6 shown below.

Table 6. Results of multiple regression analysis on symbolic adoption after ICIV

SI No.	Independent variables	Regression coefficient	Standard error	't' value
1	Education	0.0048660	0.13807	0.352 <sup>NS</sup>
2	Area under vegetables	0.0040747	0.13918	0.293 <sup>NS</sup>
3	Economic motivation	0.21399	0.0038167	1.832*
4	Innovativeness	0.12776	0.0056408	2.265**
5	Scientific orientation			
6	Achievement motivation	0.14590	0.0051725	2.821**
7	Level of aspiration	-0.21078	0.14445	-1.459 <sup>NS</sup>
8	Socially responsible audience behaviour (SRAB)	0.0074241	0.0054754	1.356 <sup>NS</sup>
9	Need for cognition (NFC)	-0.11267	0.006318	-1.669 <sup>NS</sup>
10	Poly chronic attitude (PCA)	0.0051884	0.0039333	1.319 <sup>NS</sup>
11	Self esteem	-0.27150	0.0040609	-2.469**

\* Significant at 5% level

R square = 0.59204

\*\* Significant at 1% level

NS - Not significant

From the Table 6, it is clear that all the eleven independent variables in together contributed to an extent of 59.2 per cent variation in the dependent variable symbolic adoption. Out of the 11 variables considered for multiple regression analysis, only three of them showed significant positive influence on symbolic adoption. The variable self esteem showed negatively significant association with symbolic adoption. Whereas other independent variables had no significant contribution in the dependent variable symbolic adoption.

#### 4.5 Effectiveness of different video formats in ICIV

##### 4.5.1 Effectiveness of different video formats in ICIV in terms of knowledge gain

To understand the effectiveness of different video formats in ICIV, the analysis of variance was worked out between the treatments in terms of knowledge gain attained at the end of each treatment. The results are shown in Table 7.

Table 7. Analysis of variance of different treatments of ICIV in terms of knowledge gain

Source	Degrees of freedom	Sum of squares	Mean square	'F' value
Between	4	6.521	1.630	10.808**
Within	145	21.872	0.151	
Total	149	28.872		

\*\* Significant at 1 per cent level

The significant 'F' value at 1 per cent level of probability indicates that there was significant difference between the treatments regarding knowledge gain. From this, it could also be inferred that the four formats of video namely the features, panel discussion, skill demonstration and interview varied significantly in imparting knowledge to the viewers.

#### 4.5.2 Effectiveness of different video formats in ICIV in terms of symbolic adoption

The analysis of variance worked out to find out the effectiveness of different formats of video in terms of symbolic adoption is presented in the Table 8.

Table 8. Analysis of variance of different treatments of ICIV in terms of symbolic adoption

Source	Degrees of freedom	Sum of squares	Mean square	'F' value
Between	4	50.640	12.660	6.641**
Within	145	276.433	1.906	
Total	149	327.073		

\*\* Significant at 1 per cent level

The significant 'F' value noted in the Table 8 points out significant variation between the treatments in terms of symbolic adoption. This also indicates that the four formats of video namely features, panel discussion, skill demonstration and interview used in Instructor Controlled Interactive Video differed significantly in attaining symbolic adoption among respondents with regard to practices on IPM in vegetables.

#### 4.6 Impact of ICIV in terms of knowledge gain and symbolic adoption on IPM in vegetables

##### 4.6.1 Impact of ICIV in terms of knowledge gain on IPM in vegetables

The five groups of respondents were exposed to different treatments such as

T<sub>1</sub> - Features (video) + discussion

T<sub>2</sub> - Panel discussion (video) + discussion

T<sub>3</sub> - Skill demonstration (video) + discussion

T<sub>4</sub> - Interview (video) + discussion

T<sub>5</sub> - Discussion alone (control)

The mean values of respondents knowledge level before and after each treatment were worked out which are furnished below.

Table 9. Mean values of respondents knowledge level before and after each treatment

Treatment	Before treatment	After treatment	't' value
T <sub>1</sub>	5.66	8.7	10.1983**
T <sub>2</sub>	6.61	8.5	8.8321**
T <sub>3</sub>	5.54	8.3	9.9386**
T <sub>4</sub>	7.03	8.7	7.8981**
T <sub>5</sub>	6.20	7.4	6.2657**

\*\* Significant at 1% level

From Table 9, it could be observed that all the treatments were significant in terms of the 't' values. The results also show that among the treatments T<sub>1</sub> was most effective followed by T<sub>3</sub>, T<sub>2</sub>, T<sub>4</sub> and T<sub>5</sub> in decreasing order of effectiveness in terms of knowledge gain of respondents (Fig. 5).

#### 4.6.2 Impact of ICIV in terms of symbolic adoption of IPM in vegetables

Regarding symbolic adoption of IPM in vegetables through ICIV, the mean values of respondents symbolic adoption were calculated and given in the Table 10.

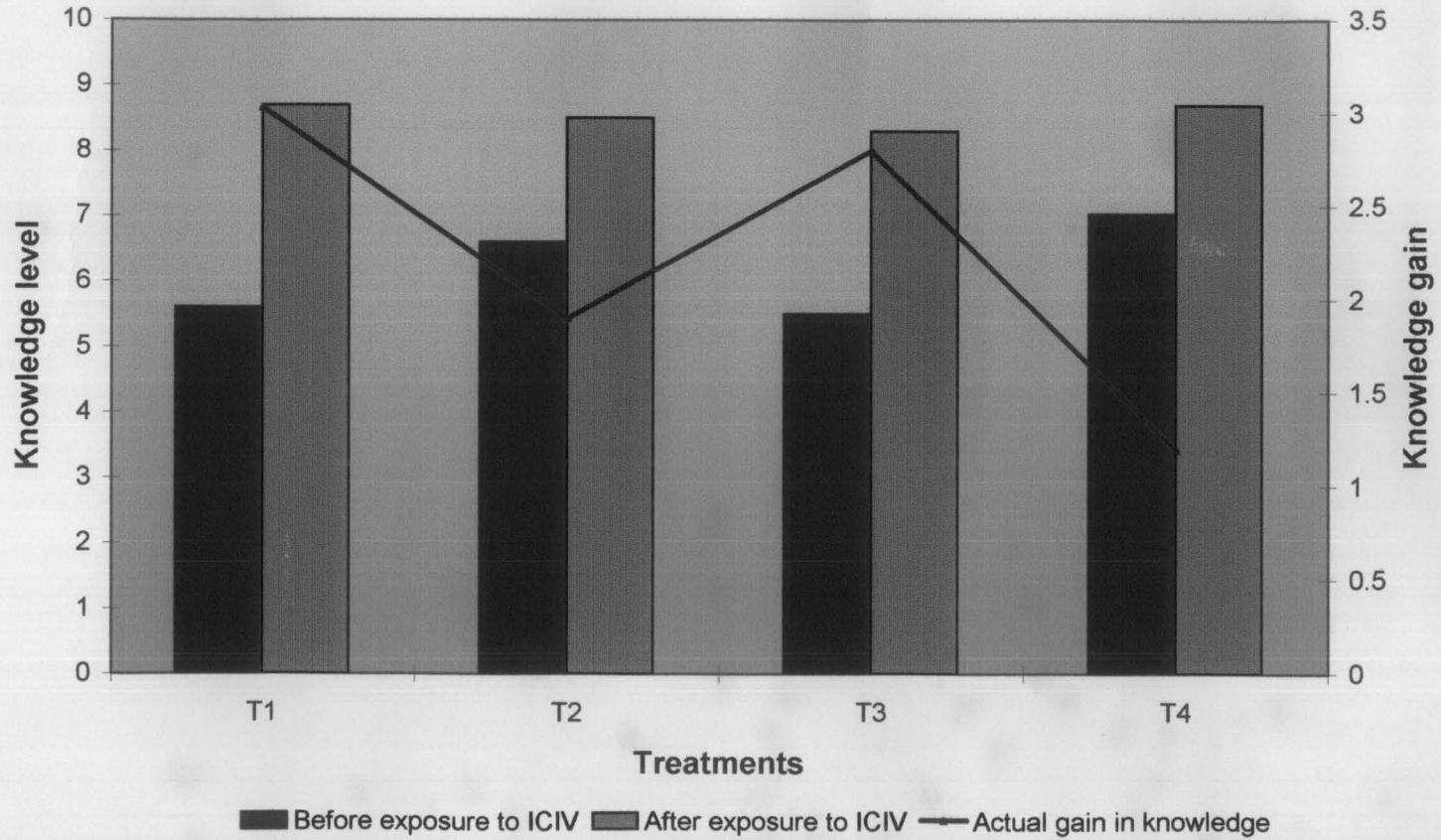
Table 10. Mean values of respondents symbolic adoption after each treatment

Treatment	After treatment	't' value
T <sub>1</sub>	7.87	5.9486**
T <sub>2</sub>	6.98	1.9929**
T <sub>3</sub>	7.07	2.4538**
T <sub>4</sub>	6.81	1.8207**
T <sub>5</sub> (control)	6.13	-

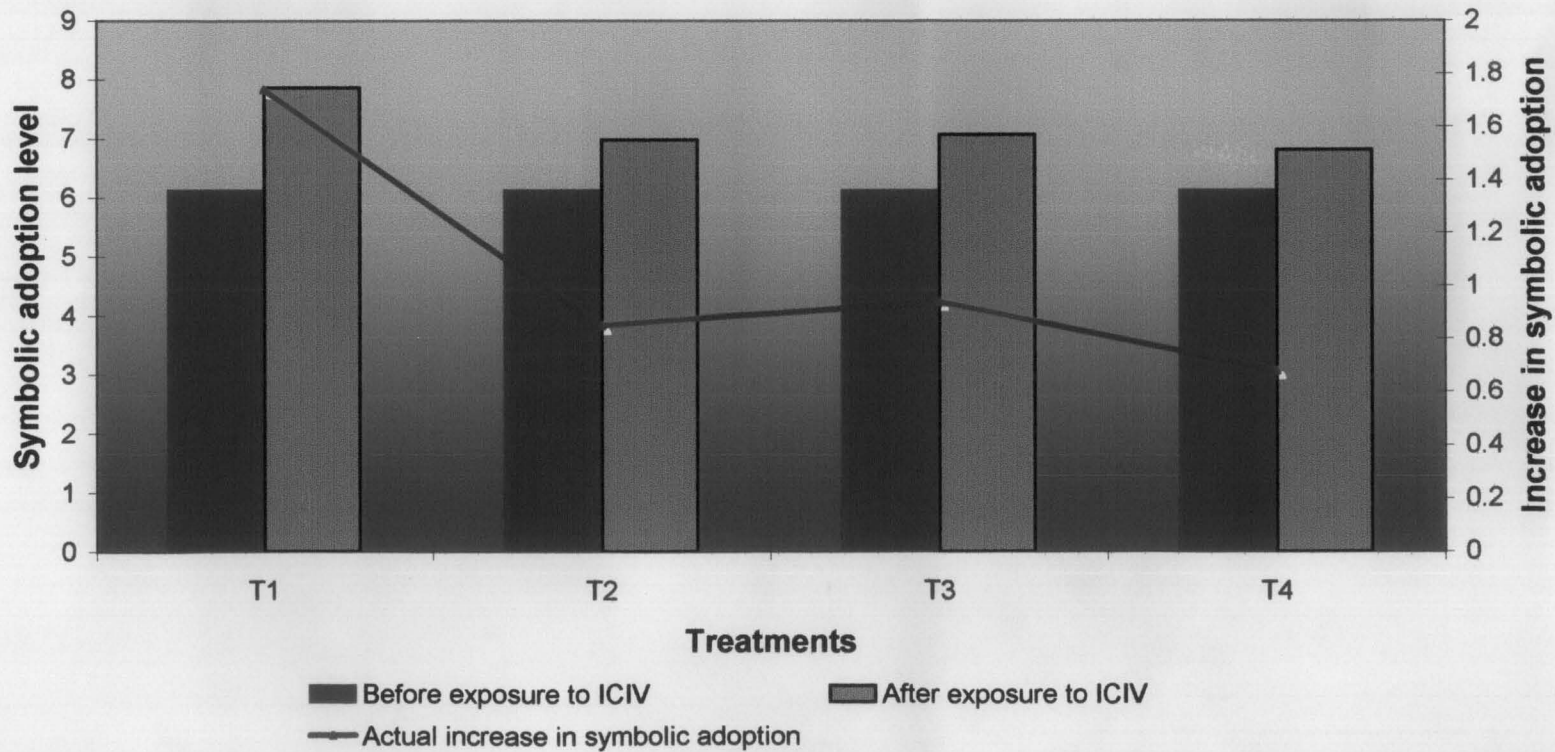
\*\* Significant at 1% level

Like the previous table here also, it could be seen that the four treatments with ICIV varied significantly with T<sub>5</sub> (control) in terms of symbolic adoption which is substantiated by the significant 't' values at 1% level of probability. Furthermore, the results also show the treatment T<sub>1</sub> to be most effective regarding symbolic adoption followed by T<sub>3</sub>, T<sub>2</sub> and T<sub>4</sub> (Fig.6).

**Fig. 5 Effectiveness of different treatments of ICIV in terms of knowledge gain**



**Fig. 6 Effectiveness of different treatments of ICIV in terms of symbolic adoption**



## *Discussion*

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## DISCUSSION

The conclusions derived from the present study are presented in this chapter under the following headings:

- 5.1 Distribution of respondents based on selected variables with regard to profile characteristics of respondents
  - 5.2 Distribution of respondents based on knowledge gain and symbolic adoption after ICIV
  - 5.3 Influence of selected profile characteristics of respondents on their knowledge gain after ICIV
  - 5.4 Influence of selected profile characteristics of respondents on their symbolic adoption after ICIV
  - 5.5 Effectiveness of different video formats in ICIV
  - 5.6 Impact of ICIV in terms of knowledge gain and symbolic adoption on IPM in vegetables
- 
- 5.1 Distribution of respondents based on selected variables with regard to profile characteristics of respondents**

The distribution of respondents based on selected independent variables revealed that majority of respondents were in high category in terms of education (82%), economic motivation (60%), scientific orientation (57%), achievement motivation (51%), socially responsible audience behaviour (71%), need for cognition (64%), poly chronic attitude (52%) and self esteem

(55%). With regard to other variables such as area under vegetables, innovativeness and level of aspiration, respondents were in low category.

The higher literacy level witnessed throughout the state can be rationale behind the higher educational status realised with the majority of the respondents considered for the study. Not surprisingly, this might have led to the higher economic motivation, scientific orientation, achievement motivation and need for cognition among the respondents.

The mounting population density in the state has made the land availability for agriculture as a constraint. Moreover, the respondents being vegetable farmers, that too women, it is only natural to find the majority of them with lesser area under vegetable cultivation. The low level of innovativeness found among the respondents can be attributed towards to the low of aspiration witnessed among them.

## **5.2 Distribution of respondents based on knowledge gain and symbolic adoption after ICIV**

The distribution of respondents based on knowledge gain and symbolic adoption showed that majority of them were in high category. It is realised that 62 per cent and 71 per cent of them were in high category with respect to knowledge gain and symbolic adoption respectively.

The effectiveness of the Instructor Controlled Interactive Video as an eminent group media in increasing the knowledge level of the respondents

which ultimately makes them to mentally accept the ideas given through ICIV is supported by the above finding. Majority of respondents in high category in knowledge gain and symbolic adoption can be due to the edge of ICIV in utilising all the senses of the receiver and also its interpersonal effect while delivering message to the audience. Further more, ICIV has the added advantage that it can be stopped in the middle and the doubts can be cleared with the help of the instructor/subject matter specialist (SMS) available for the session.

The relevancy of the message given to the potential audience also might have contributed much towards the higher knowledge gain and symbolic adoption. Nowadays, pest management in vegetables has become a menace due to indiscriminate use of pesticides and other chemicals. This demands an alternative approach which would be both effective and eco-friendly. In that case, Integrated Pest Management practices becomes more relevant and acceptable for the audience which ultimately lead them towards higher knowledge gain and symbolic adoption.

These results are in conformity with the findings of Selvaraj (1990) and Jeyakumar and Manoharan (1999).

### **5.3 Influence of selected profile characteristics of respondents on their knowledge gain after ICIV**

Correlation analysis of knowledge gain on selected independent variables of the respondents showed that out of 11 variables studied, four

variables had positive significant relationship with their knowledge gain. Two variables were negatively significant whereas the remaining five variables did not show any significant relationship with knowledge gain.

The variables such as area under vegetables, scientific orientation, socially responsible audience behaviour and need for cognition were significant at 1 per cent level. Poly chronic attitude and self esteem were negatively significant at 5 per cent and 1 per cent level respectively.

Higher scientific orientation and owning more farm size might have led to positive thinking on new technologies. This might have made the respondents to actively involve in the programme which ultimately resulted in gaining more knowledge.

Integrated pest management (IPM) is a very new found approach in pest control which is considered more scientific and eco-friendly towards sustainable agricultural production. Awareness in health and environmental hazards had forced the people to choose better alternatives. So, it is only natural to find the significant association between socially responsible behaviour of the audience and their knowledge gain regarding IPM.

The results of the multiple linear regression analysis evolved an  $R^2$  value of 0.61772, which means 61.7 per cent of variation in knowledge gain was explained by the significant variables related to it. Out of 11 variables, five variables were significantly contributing towards knowledge gain of

respondents. The variables like area under vegetables, scientific orientation, level of aspiration and socially responsible audience behaviour contributed positively whereas self esteem contributed negatively towards knowledge gain.

The contribution of independent variables to the tune of 61.7 per cent indicates that, these were the most important variables affecting knowledge gain of IPM in vegetables when rendered through ICIV. The positive coefficient of the variable area under vegetables means that as the area increases it would improve the cognitive need of the farmers regarding the message on IPM in vegetables which results in increased knowledge level. This is in accordance with the findings of Selvaraj (1990), Philip (1995) and Selvaraj (1997).

Self esteem being the degree of superiority that an individual places on himself, contributed negatively towards knowledge gain. In day to day life, it is common to notice that highly self esteemed people to be more controversial, as they don't accept the ideas of others easily. So, it is not surprising to find the increased level of self esteem among the respondents contributing negatively towards their knowledge gain.

#### **5.4 Influence of selected profile characteristics of respondents on their symbolic adoption after ICIV**

The results of the Table 5 shows a significant relationship of six independent variables with symbolic adoption of respondents. Farmers with

more area under vegetables have a higher tendency to adopt the message related to vegetables. This finding is on par with the findings of Chandrakandan (1982) and Philip (1995).

Rogers (1983), while explaining the adopter categories proclaims the innovators to be the first in adopting new technologies. Hence, it is natural to see the variable innovativeness having a significant positive relationship with symbolic adoption. The scientific orientation of the individuals as well as the achievement motivation helped them to reinforce the cognitive domains regarding the innovative technical know-how rendered to them. Such complimentary conditions naturally contribute more towards symbolic adoption.

One can be astonished to notice the level of aspiration getting negatively related towards symbolic adoption, that too the relation being significant at 1 per cent level. Though IPM is a modern scientific approach in pest control, its observability in killing the pests as that of chemical pesticides is very low. The highly aspiring people are very often swayed by the facts that appear before the eyes rather than understanding the rationale behind such things. Such people believe more in observable things and don't worry much about the long lasting and sustainable technologies. This creates space for the level of aspiration to contribute negatively towards symbolic adoption of eco-friendly technologies like IPM.

Results of the multiple linear regression analysis depicts the  $R^2$  value of 0.59204, indicating 59.2 per cent of the variation in the dependent variable symbolic adoption is being explained by the 11 independent variables selected for the study.

The most significantly contributing variables were scientific orientation, achievement motivation and innovativeness. Self esteem contributed negatively towards symbolic adoption which was significant at 1 per cent level. As mentioned earlier, the persuability of the people with higher self esteem is low which might be the possible reason behind its negative relation with that of symbolic adoption.

### **5.5 Effectiveness of different video formats in ICIV**

The analysis of variance of different treatments reveals a significant 'F' value both in terms of knowledge gain and symbolic adoption. This substantiates the fact that there was significant difference between the treatments. The reason might be due to the different formats of video programme used in ICIV while conducting different treatments. The different formats being features, panel discussion, skill demonstration and interview it is well understood that each type varies abundantly in the way of delivery of the message. Hence, it is only natural to realise a significant difference between the treatments. This is in conformity with the findings of Viswanathan *et al.* (1999).

## **5.6 Impact of ICIV in terms of knowledge gain and symbolic adoption on IPM in vegetables**

The mean values of farmers knowledge and symbolic adoption before and after each treatment shown in the Table 9 and Table 10 depicted significant 't' value for all the treatments which in turn indicates the effectiveness of all the treatments in imparting knowledge and increasing symbolic adoption towards the concept of IPM in vegetables.

Further, the analysis of different treatments reveals that there was substantial improvement in knowledge and symbolic adoption at 1 per cent level of significance due to the treatment stimuli.

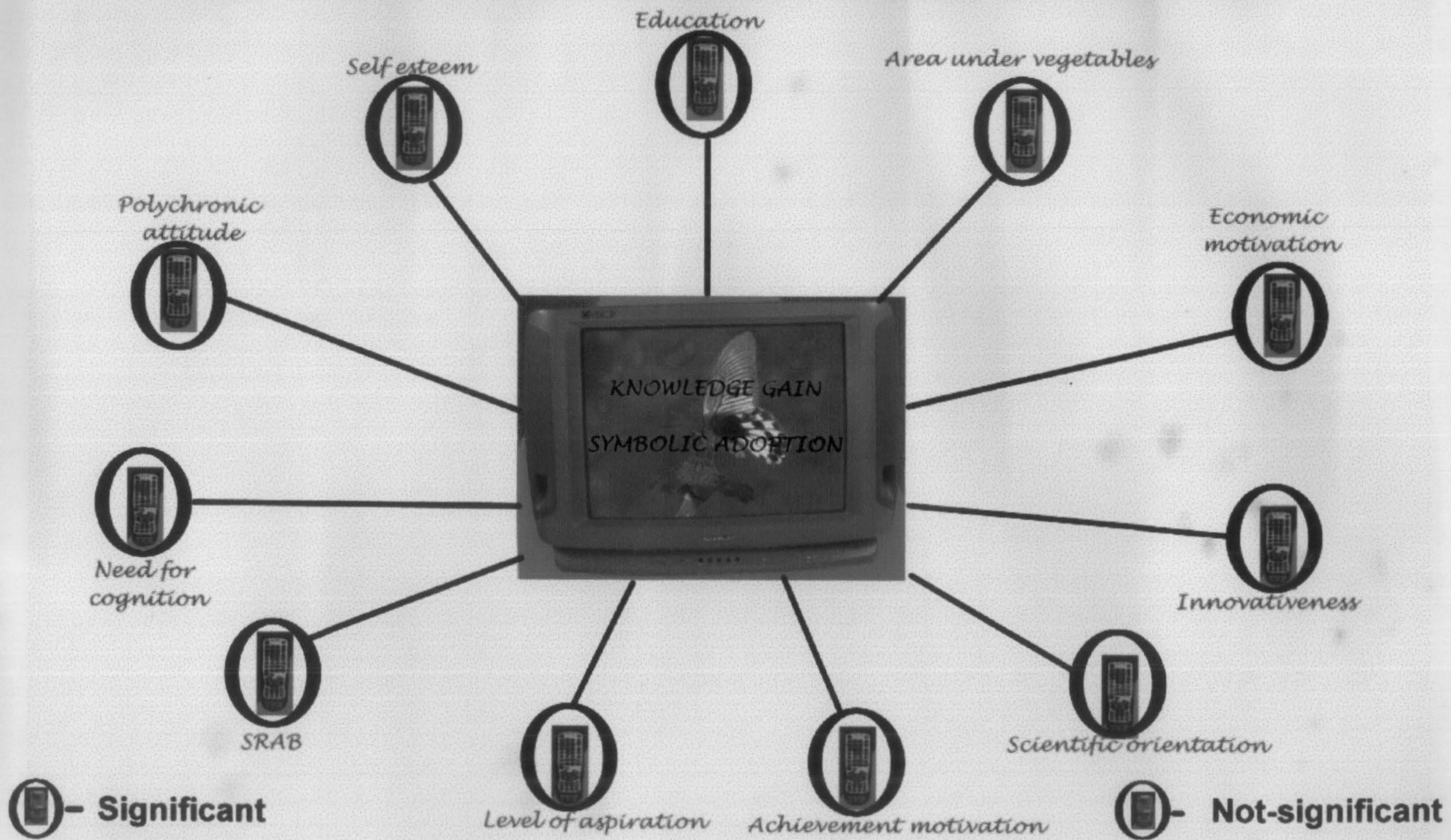
Among the treatments, T<sub>1</sub>, involving feature mode of video presentation in ICIV was found to be most effective both with respect to knowledge gain and symbolic adoption. This may be due to the fact that features gives detailed information with an aesthetic sense in its presentation, which proves more attractive to the audience. Moreover, the use of 2D and 3D visuals in features might have made it more acceptable and clear in its message. These findings are in line with the observations of Philip (1995).

Apart from this, with regard to effectiveness of treatments, T<sub>3</sub> involving skill demonstration mode of video presentation was more effective than T<sub>2</sub>, involving panel discussion mode of video, which was subsequently followed by T<sub>4</sub> i.e., treatment with interview mode of video presentation. Skill demonstration is easily understandable even to illiterate farmers and it clearly

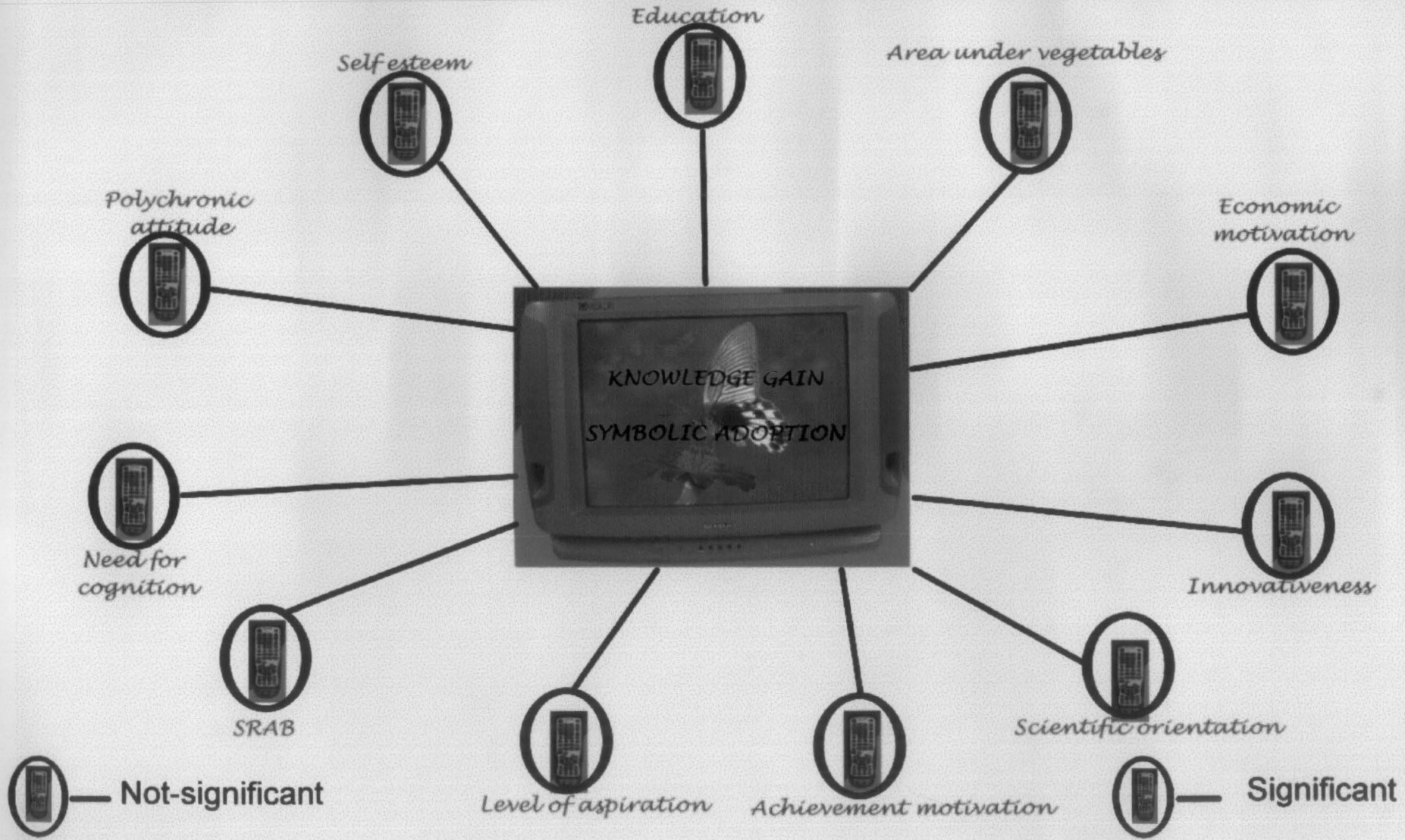


explains the technical know-how and skills involved in the message. It stimulates the reality of a method and gives confidence to adopt the practice. Going even further, skill demonstration increases the empathy of the respondents thereby reinforcing the concept more sound upon the audience. The results obtained above are in conformity with the findings of Viswanathan *et al.* (1999).

# EMPIRICAL MODEL OF THE STUDY SHOWING THE RELATIONSHIP BETWEEN SELECTED INDEPENDENT VARIABLES AND KNOWLEDGE GAIN AFTER ICIV



# EMPIRICAL MODEL OF THE STUDY SHOWING THE RELATIONSHIP BETWEEN SELECTED INDEPENDENT VARIABLES AND SYMBOLIC ADOPTION AFTER ICIV



The major findings of the study are

1. The distribution of the respondents based on knowledge gain and symbolic adoption after ICIV showed that majority of respondents were in high category both in terms of knowledge gain and symbolic adoption.
2. Out of 11 independent variables studied four variables has positive significant relationship with knowledge gain. Two variables were negatively related to knowledge gain where the relation was also found to be significant.
3. Multiple regression analysis showed that 62 per cent variation in knowledge gain was contributed by all the independent variables as a whole.
4. Correlation analysis of the independent variables with symbolic adoption after ICIV showed that out of 11, six variables were significantly related to symbolic adoption of the respondents. The most important variables were area under vegetables, innovativeness scientific orientation, achievement motivation and Socially Responsible Audience Behaviour (SRAB). The variable level of aspiration had a significant negative relationship with symbolic adoption.
5. Multiple regression analysis for symbolic adoption revealed that 59.2 per cent variation in it was explained by the selected independent variables. The variables economic motivation, innovativeness, achievement motivation were positively associated with symbolic adoption whereas self esteem contributed negatively towards symbolic adoption.

6. Analysis of variance was carried out to analyse the effectiveness of different treatments. It was found that all the treatments varied significantly both in terms of knowledge gain and symbolic adoption.
7. So as to compare the different treatments 't' test was done which revealed that T<sub>1</sub> (Features) was most effective in terms of knowledge gain and symbolic adoption. Next to it was T<sub>3</sub> (skill demonstration) followed by T<sub>2</sub> (panel discussion) and T<sub>4</sub> (interview).
8. Maximum gain in knowledge was observed in T<sub>1</sub>. Similarly the same treatment was most effective for symbolic adoption also.

### **Implications of the study**

Introspection of the results obtained implies that

- a) The results revealed that substantial increase in knowledge had occurred among the participants after ICIV on IPM in vegetables. Hence, ICIV can be indifferentially used for educating the farming population.
- b) Similarly, ICIV was also effective in imparting skills as proved by the favourable decision of the majority of farm women to adopt the technology recommended through ICIV. It implies that ICIV can be used an effective training tool to popularise skills among the rural people particularly the farm women.
- c) The variables like area under vegetables, scientific orientation, socially responsible audience behaviour had a significant relationship with knowledge gain and symbolic adoption of IPM in vegetables through

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# *Appendices*

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## APPENDIX-I

### KERALA AGRICULTURAL UNIVERSITY

Dr.Ranjan S. Karippai  
Assoc. Professor & Head

Department of Agrl. Extension  
College of Horticulture, Thrissur  
Dated: 5<sup>th</sup> Jan. 2000

Dear Sir/ Madam,

Sub: P.G. Research programme - Judges opinion for relevancy rating of the variables - reg.

*Wish you a Happy and Prosperous New Year!*

I am writing this letter in connection with a research study entitled 'Effectiveness of instructor controlled interactive video (ICIV) in dissemination of farm technology' undertaken by one of our PG students Mr.D.Radhakrishan. He has also planned to study the influence of profile characteristics of vegetable farmers on the effectiveness of the video programmes.

We have made a list of independent variables identified for this purpose based on the review of literature and discussion with the extension scientists. Now, these variables are to be rated for their degree of relevance to be included in the study to assess their influence on the effectiveness of the ICIV. Considering your expertise and rich experience in extension research, we have selected you as one of the judges for making this rating.

I request you to kindly indicate your valuable judgement about the relevancy of each variable for inclusion by putting a 'tick' (  $\checkmark$  ) mark in the appropriate column. Kindly add any other variable, if considered appropriate, to the list with necessary comments. I would be thankful, if you can send the same to the student through the self addressed stamped envelope enclosed, at the earliest.

With warm regards,

Yours sincerely,

Ranjan S. Karippai

**LIST OF INDEPENDENT VARIABLES**  
 [Kindly put a (√) mark in the appropriate column]

Sl. No.	Independent variables	Most relevant	Relevant	Not relevant
1.	Age			
2.	Educational status			
3.	Occupational status			
4.	Annual income			
5.	Area under vegetables			
6.	Experience in vegetables			
7.	Social participation			
8.	Value orientation			
9.	Extent of cosmopolitaness			
10.	Economic motivation			
11.	Personal-localite exposure			
12.	Scientific orientation			
13.	Information seeking behaviour			
14.	Innovativeness			
15.	Information source utilization			
16.	Risk orientation			
17.	Positiveness			
18.	Self reliance			
19.	Level of aspiration			
20.	Achievement motivation			
21.	Attitude towards video programmes			
22.	Credibility attached to video			
23.	Perception about video programmes			
24.	Attitude towards the instructor			
25.	Potentiality to adopt messages			
26.	Knowledge about modern farm practices			
27.	Change proneness			
28.	Self-esteem			

Signature  
Name & Address

## APPENDIX-II Questionnaire

1. Name :

2. Educational status :

Primary  
Upper primary  
Higher Secondary  
Pre-degree  
Degree/more

3. Area under vegetables : ..... cents

### 4. Economic motivation

Sl. No.		Agree	Undecided	Disagree
i	A farmer should work towards large yields and economic profit			
ii	The most successful farmer is one who makes maximum profit			
iii	A farmer should try any new farming idea which may earn him more money			
iv	It is difficult for the farmers children to make good start unless he provides them with economic assistance			

### 5. Innovativeness

Sl. No.		Always	Sometimes	Never
i	Do you practice biological pest control method in any crop?			
ii	Do you collect information regarding new agricultural practices from the research station/Universities?			
iii	As soon as you get information regarding a new agricultural practice, will you take immediate decision to put into practice?			
iv	Do you practice any improved recommendations after getting necessary information, without any delay?			

### 6. Scientific orientation

Sl. No.		Agree	Undecided	Disagree
i	New methods of farming gives better results to a farmer than old ones?			
ii	The way of farming of our forefathers is still the best way to farm even today			
iii	Even a farmer with lot of farm experience should use new methods of farming			
iv	A good farmer experiments with new ideas in farming			
v	Though it takes time for a farmer to learn new methods in farming it is worth the efforts			
vi	Traditional methods of farming have to be changed in order to raise the living of a farmer			

### 7. Achievement motivation

(Give your opinion about the following statements)

i) Success brings relief for further determination and not just pleasant feelings

Strongly Agree/Agree/Undecided/Disagree/Strongly Disagree

ii) How true it is to say that your efforts are directed towards avoiding failure?

Quite true/Fairly true/Not very true/Untrue/Quite untrue

iii) How often do you seek opportunity to excel?

Always/Frequently/Seldom

iv) In how many spheres do you think you will succeed in doing as well as you can?

Most/Many/Same/Few/Very few

### 8. Level of aspiration

i) What is the extent of education that your children should have?

School level/College level/Technical (or) Professional

ii) What kind of job/work your children should take after their education?

Agriculture/Govt. job/Business

iii) What would you expect to be increase in your land holding in next 3 years?

No increase/Increase to same extent/Double the area

### 9. Socially responsible audience behaviour (SRAB)

Sl. No		Strongly agree	Agree	Un-decided	Dis-agree	Strongly disagree
i	Pollution is presently one of the most critical problems facing the nation					
ii	I feel people worry too much about pesticides on food products					
iii	I became worried when I think about the harm being done to plant and animal life by pollution					
iv	I would be willing to stop using inputs that are polluting the environment eventhough it might be inconvenient					

### 10. Need for cognition (NFC)

Sl. No		Strongly agree	Agree	Un-decided	Dis-agree	Strongly disagree
i	I really enjoy a task that involves coming up with solutions to problems					
ii	I have difficulty in thinking in new and unfamiliar situations					
iii	I like tasks that require little thought once I have learned them					
iv	I would prefer a task that is intellectual, difficult and important					

### 11. Polychronic attitude

Sl. No		Strongly agree	Agree	Un-decided	Dis-agree	Strongly disagree
i	I believe that involving in several activities at the same time will not hinder my efficiency					
ii	People should not try to do many things at the same time					
iii	I don't like to mix up several activities at the same time					
iv	I really enjoy involving in many things simultaneously					
v	I am comfortable doing several things at the same time					



## 12. Self esteem

Sl. No		Strongly agree	Agree	Un-decided	Dis-agree	Strongly disagree
i	I am proud of my performance in agriculture					
ii	I find it very difficult to talk in front of a group					
iii	I can usually take care of myself					
iv	When I am in a group of people, I often have trouble thinking about the right things to talk about					
v	I prefer to do things that are novel and difficult					

## Knowledge Test

		True/False
1	Indiscriminate use of pesticides leads to death of beneficial insects	True/False
2	IPM includes use of resistant varieties	”
3	Use of biological methods to control the pest population does not form a part of IPM	”
4	Over use of pesticides causes environmental pollution	”
5	Soap and neem oil are the major two ingredients needed for the neem oil emulsion preparation	”
6	Neem oil emulsion can be effectively used in the control of soft bodied insects like leaf minor/rocket worm	”
7	Use of light trap and tulsi trap are some of the other biological pest control methods	”
8	Field burning is one of the effective method used as a part of IPM	”
9	Over use of pesticides may lead to resurgence in insect pests	”
10	Arka anamika is the familiar resistant variety used against mosaic in bhendi	”

## Symbolic adoption

Are you willing to adopt the following practices if you are provide with necessary facilities

	Yes/No
1. Resistant varieties	”
2. Field sanitation	”
3. Fruit trap	”
4. Tulsi trap	”
5. Judicious use of pesticides	”
6. Neem oil emulsion	”
7. Field burning	”
8. Bio-control agents like NPV	”

**APPENDIX –III**

ദയവായി ഈ ചോദ്യാവലി ശ്രദ്ധയോടെ വായിച്ച് താങ്കളുടെ പ്രതികരണങ്ങൾ രേഖപ്പെടുത്തുക.

1. പേര് :
2. വിദ്യാഭ്യാസ നിലവാരം :
  1. പ്രൈമറി സ്കൂൾ
  2. അപ്പർ പ്രൈമറി സ്കൂൾ
  3. ഹൈസ്കൂൾ
  4. ഡിഗ്രി
  5. ബിരുദതലവും അതിൽ കൂടുതലും
3. പച്ചക്കറി കൃഷിയുടെ വിസ്തൃതി : .....സെന്റ്  
താഴെ കൊടുത്തിരിക്കുന്നവയ്ക്ക് താങ്കളുടെ അഭിപ്രായങ്ങൾ രേഖപ്പെടുത്തുക.

4.		യോജിക്കുന്നു	അറിയില്ല	വിയോജിക്കുന്നു
(i)	കർഷകൻ കൂടുതൽ വിളവിനും സാമ്പത്തിക ലാഭത്തിനും ശ്രമിക്കണം.			
(ii)	ഏറ്റവും മികച്ച കർഷകൻ ഏറ്റവും ലാഭം ഉണ്ടാക്കുന്നയാളാണ്			
(iii)	കൂടുതൽ ലാഭത്തിനായി പുതിയ കാർഷികാശയങ്ങൾ പ്രാവർത്തികമാക്കുന്നയാളാകണം. നല്ല കർഷകൻ			
(iv)	കർഷകരുടെ മക്കൾക്ക് ജീവിത വൃത്തിയിൽ നല്ല തുടക്കം കിട്ടണമെങ്കിൽ രക്ഷിതാക്കൾ സാമ്പത്തിക സഹായം ചെയ്യണം.			

5.		എപ്പോഴുമുണ്ട്	ചിലപ്പോൾ മാത്രം	ഒരിക്കലുമില്ല
(i)	താങ്കൾ ഏതെങ്കിലും വിളയിൽ ജൈവീക കീടനിയന്ത്രണമാർഗ്ഗം പരീക്ഷിച്ചിട്ടുണ്ടോ?			
(ii)	താങ്കൾ പുതിയ കൃഷിരീതികളെക്കുറിച്ച് ഗവേഷണകേന്ദ്രങ്ങളിൽ നിന്നോ സർവകലാശാലയിൽ നിന്നോ വിവരം ശേഖരിക്കാറുണ്ടോ?			
(iii)	താങ്കൾക്ക് പുതിയ കൃഷിരീതിയെക്കുറിച്ച് വിവരം കിട്ടിയാലുടനെ അത് പ്രാവർത്തികമാക്കാറുണ്ടോ?			
(iv)	കൂടുതൽ ഫലപ്രദമായ രീതികളെക്കുറിച്ച് വിവരം കിട്ടിയാലുടനെ അത് പ്രാവർത്തികമാക്കാറുണ്ടോ?			

6.		യോജിക്കുന്നു	അറിയില്ല	വിയോജിക്കുന്നു
(i)	നവീന കൃഷിരീതികൾ പഴയ രീതിയേക്കാൾ കൂടുതൽ ഫലം നൽകുന്നതാണ്			
(ii)	നമ്മുടെ പൂർവ്വികരുടെ കൃഷിരീതിയാണ് ഇപ്പോഴും ഏറ്റവും മികച്ച കൃഷിരീതി			
(iii)	ധാരാളം അനുഭവസമ്പത്തുള്ള കർഷകനായാൽ പോലും പുതിയ കൃഷിരീതികൾ സ്വീകരിക്കണം.			
(iv)	ഒരു നല്ല കർഷകൻ പുതിയ കാർഷിക ആശയങ്ങൾ പരീക്ഷിക്കും.			
(v)	പുതിയ കൃഷിരീതികൾ മനസ്സിലാക്കാൻ സമയമെടുക്കുമെങ്കിലും അവ വളരെ നല്ല ഗുണം ചെയ്യും.			
(vi)	കർഷകന്റെ ജീവിത നിലവാരം ഉയർത്തുന്നതിന് പഴയ കൃഷിരീതികളിൽ മാറ്റം വരുത്തണം.			

7. താഴെ പറയുന്ന കാര്യങ്ങളോടുള്ള താങ്കളുടെ അഭിപ്രായം രേഖപ്പെടുത്തുക.

(i) വിജയകരമായ അനുഭവങ്ങൾ വെറും സന്തോഷം മാത്രമല്ല മറിച്ച് കൂടുതൽ ലക്ഷ്യബോധവും നൽകുന്നു.

പൂർണ്ണമായി യോജിക്കുന്നു	കുറായൊക്കെ യോജിക്കുന്നു	പ്രത്യേക അഭിപ്രായമില്ല	മിക്കവാറും വിയോജിക്കുന്നു	പൂർണ്ണമായി വിയോജിക്കുന്നു
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(ii) താങ്കളുടെ പരിശ്രമം പരാജയം ഒഴിവാക്കാനുള്ളതാണെന്ന് പറഞ്ഞാൽ അതെത്ര മാത്രം സത്യമാണ്.

പൂർണ്ണസത്യം	ഭാഗികമായി സത്യം	അറിയില്ല	ഏതാണ്ട് അസത്യമാണ്	തികച്ചും അസത്യം
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(iii) നിങ്ങൾ അറിവ് നേടാനുള്ള അവസരങ്ങൾ ഉപയോഗപ്പെടുത്താറുണ്ടോ?

എല്ലായ്പ്പോഴും	ഇടയ്ക്കിടെ	ഒരിക്കലുമില്ല
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(iv) ഏതെല്ലാം മേഖലകളിലാണ് താങ്കൾ വിജയിക്കുമെന്നും വിജയിക്കാൻ കഴിയുമെന്നും കരുതുന്നത്.

എല്ലാ മേഖലകളിലും	കുറായൊക്കെ	ചിലത് മാത്രം	വളരെ അപൂർവ്വം	ഒന്നുമില്ല
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8 (i) താങ്കളുടെ മക്കൾക്ക് ഏതുവരെ വിദ്യാഭ്യാസം ഉണ്ടാകണം?

സ്കൂൾ	കോളേജ്	പ്രൊഫഷണൽ	ടെക്നിക്കൽ
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(ii) ഏതുതരം ജോലിയാണ് വിദ്യാഭ്യാസത്തിനു ശേഷം താങ്കളുടെ മകൻ സ്വീകരിക്കേണ്ടത്?

കൃഷി	സർക്കാർ ജോലി	ബിസിനസ്സ്
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(iii) താങ്കളുടെ കൈവശമുള്ള ഭൂമിയിൽ അടുത്ത മൂന്നു വർഷത്തിൽ എന്ത് മാറ്റം കൃഷിയിൽ പ്രതീക്ഷിക്കുന്നു ?

വിളവ് കുടില്ല	കുറച്ച് കുടും	വളരെ കുടും
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		പൂർണ്ണമായും യോജിക്കുന്നു	കുറഞ്ഞതോ യോജിക്കുന്നു	അറിയില്ല	മിക്കവാറും ശരിയല്ല	ഒട്ടും ശരിയല്ല
9.						
(i)	ഇന്ന് നാടിന്റെ പ്രധാന വിപത്തുകളിൽ ഒന്ന് മലിനീകരണമാണ്.					
(ii)	ഭക്ഷ്യവസ്തുക്കളിൽ കീടനാശിനി പ്രയോഗം അപകടകരമാണ്					
(iii)	മലിനീകരണം ജീവജാലങ്ങളിൽ ഉണ്ടാക്കുന്ന പ്രശ്നങ്ങൾ ഗൗരവമുള്ളതാണ്					
(iv)	മലിനീകരണമുണ്ടാക്കുന്ന വസ്തുക്കൾ ഒഴിവാക്കുന്നത് അസൗകര്യമുണ്ടാക്കുമെങ്കിൽ പോലും ഞാൻ അതിന് തയ്യാറാണ്					
(v)	മലിനീകരണത്തോട് കുറയ്ക്കാൻ വ്യക്തിപരമായി ബുദ്ധിമുട്ടാൻ പോലും ഞാൻ തയ്യാറാണ്					
10.						
(i)	പ്രശ്നങ്ങൾക്ക് പരിഹാരം കണ്ടെത്തുന്ന വിധത്തിലുള്ള ഏത് ജോലിയും എനിക്കിഷ്ടമാണ്					
(ii)	പുതിയതും പരിചയമില്ലാത്തതുമായ അവസരങ്ങളിൽ തീരുമാനമെടുക്കാൻ എനിക്ക് പ്രയാസമുണ്ട്					

		പൂർണ്ണമായും യോജിക്കുന്നു	കുറഞ്ഞതോ യോജിക്കുന്നു	അറിയില്ല	മിക്കവാറും ശരിയല്ല	ഒട്ടും ശരിയല്ല
(iii)	അധികം ചിന്തിക്കേണ്ടതില്ലാത്ത ജോലികൾ പഠിച്ചുകഴിഞ്ഞാൽ ഞാൻ അവ വളരെ ഇഷ്ടപ്പെടുന്നു					
(iv)	ഞാൻ മുൻഗണന നൽകുന്നത് ബുദ്ധി ഉപയോഗിക്കേണ്ട വിഷയം പിടിച്ചു ജോലികൾക്കാണ്					
11						
(i)	പല വിഷയങ്ങളിൽ ഒരേ സമയം ഇടപെടുന്നത് എന്റെ കഴിവ് കുറയ്ക്കുമെന്ന് ഞാൻ കരുതുന്നില്ല					
(ii)	ഒരേ സമയം പല കാര്യങ്ങൾ ചെയ്യാൻ ആൾക്കാർ ശ്രമിക്കരുത്.					
(iii)	പല കാര്യങ്ങളിലും ഒരേ സമയം മുഴുകാൻ ഞാൻ ഇഷ്ടപ്പെടുന്നില്ല					
(iv)	പല കാര്യങ്ങളിലും ഒരേ സമയം മുഴുകുന്നത് ഞാൻ വളരെയധികം ആസ്വദിക്കുന്നു					
(v)	പല കാര്യങ്ങളിലും ഒരേ സമയം ചെയ്യുന്നത് എനിക്കൊരു പ്രശ്നമായി അനുഭവപ്പെടുന്നില്ല					
12						
(i)	കൃഷിയിൽ എന്റെ നേട്ടങ്ങളിൽ ഞാൻ അഭിമാനിക്കുന്നു					
(ii)	ആൾക്കൂട്ടത്തിന്റെ മുൻപിൽ സംസാരിക്കാൻ എനിക്ക് വളരെ വിഷമമാണ്					
(iii)	സാധാരണയായി എന്റെ കാര്യങ്ങൾ നോക്കാൻ എനിക്കറിയാം					
(iv)	ഒരു ആൾക്കൂട്ടത്തിൽ വരുമ്പോൾ എന്താണ് സംസാരിക്കേണ്ടതെന്നറിയാതെ ഞാൻ വിഷമിക്കാറുണ്ട്					
(v)	പുതിയതും വിഷമമേറിയതുമായ കാര്യങ്ങൾ ചെയ്യാൻ ഞാൻ ഇഷ്ടപ്പെടുന്നു					

14		ശരി	തെറ്റ്
1	കീടനാശിനികളുടെ അനിയന്ത്രിതമായ ഉപയോഗം മിശ്രകീടങ്ങളുടെ നാശത്തിന് ഇടവരുത്തുന്നു.		
2	പ്രധിരോധശേഷിയുള്ള ഇനങ്ങളുടെ ഉപയോഗം സംയോജിത കീടനിയന്ത്രണത്തിൽ ഉൾപ്പെടുന്നു		
3	ജൈവനിയന്ത്രണ മാർഗ്ഗങ്ങൾ സംയോജിത കീടനിയന്ത്രണത്തിന്റെ ഭാഗമല്ല		
4	കീടനാശിനികളുടെ അമിതമായ ഉപയോഗം പരിസ്ഥിതി മലിനീകരണത്തിന് കാരണമാകുന്നു		
5	വെപ്പെണ്ണ മിശ്രിതത്തിന്റെ രണ്ടു പ്രധാന ഘടകങ്ങൾ സോപ്പും വെപ്പെണ്ണയുമാണ്		
6	വെപ്പെണ്ണമിശ്രിതം ഉപയോഗിച്ച് മൂലുശരീരമുള്ള കീടങ്ങളെ (റോക്കറ്റ് പൂഴു/ചരത്ര കീടം) ഫലപ്രദമായി നിയന്ത്രിക്കാം		
7	പഴക്കണിയും തുള്ളസിക്കണിയും ജൈവകീടനിയന്ത്രണത്തിലെ മറ്റു മാർഗ്ഗങ്ങളാണ്		
8	വിളവെടുപ്പു കഴിഞ്ഞ കൃഷി സ്ഥലങ്ങളിൽ തീയിടുന്നത് സംയോജിത കീടനിയന്ത്രണത്തിലെ ഫലപ്രദമായ ഒരു മാർഗ്ഗമാണ്		
9	മുൻപ് വൻതോതിൽ നാശനഷ്ടം വരുത്താതിരുന്ന കീടങ്ങളും കീടനാശിനികളുടെ അമിതമായ ഉപയോഗം കൊണ്ട് പ്രധാന കീടങ്ങളായി മാറിയെന്നു വരാം		
10	മൊസൈക്ക് രോഗത്തിനെതിരെ പ്രതിരോധശേഷിയുള്ള വെണ്ടയിമാണ് "അർക്ക അനാമിക്"		

ആവശ്യമായ സഹായവും സാഹചര്യവും ലഭിക്കുന്ന പക്ഷം താങ്കൾ താഴെപറയുന്ന മാർഗ്ഗങ്ങൾ സ്വീകരിക്കാൻ തയ്യാറാണോ?

15		ആണ്	അല്ല
1	പ്രധിരോധശേഷിയുള്ള ഇനങ്ങൾ		
2	കൃഷിയിടത്തിന്റെ ശുചിത്വം		
3	പഴക്കണി		
4	തുള്ളസിക്കണി		
5	കീടനാശിനികളുടെ ആവശ്യാനുസൃതമായ ഉപയോഗം		
6	വെപ്പെണ്ണ മിശ്രിതം		
7	വിളവെടുപ്പു കഴിഞ്ഞ കൃഷി സ്ഥലങ്ങളിൽ തീയിടൽ		
8	ന്യൂക്ലിയർ പോളിഫീഡൽ വൈറസ് പോലുള്ള ജൈവ കീടനിയന്ത്രണ രീതി		

**EFFECTIVENESS OF INSTRUCTOR  
CONTROLLED INTERACTIVE VIDEO (ICIV)  
IN DISSEMINATION OF FARM TECHNOLOGY**

**By  
D. RADHAKRISHNAN**

**ABSTRACT OF THE THESIS**

**Submitted in partial fulfilment of the  
requirement for the degree of**

**Master of Science in Agriculture**

**Faculty of Agriculture**

**Kerala Agricultural University**

**Department of Agricultural Extension**

**COLLEGE OF HORTICULTURE**

**VELLANIKKARA, THRISSUR - 680 656**

**KERALA, INDIA**

**2000**

## **ABSTRACT**

The study was aimed at bringing out the effectiveness of Instructor Controlled Interactive Video (ICIV) in popularising agricultural technologies among the farming community. The impact of the different treatments of ICIV with different video formats was also experimented. The study was conducted among 150 vegetable growers from Nadathara grama panchayath of Thrissur district. The respondents were farm women cultivating vegetables. IPM in vegetables was chosen as the message to be disseminated.

The dependent variables of the study were knowledge gain and symbolic adoption of IPM practices in vegetables. The set of 11 independent variables chosen covered the psychological and situational factors of the respondents.

The distribution of respondents based on knowledge gain and symbolic adoption showed that majority of respondents were in high category after participating in ICIV.

Out of 11 independent variables studied six variables were correlated significantly with knowledge gain. Five variables showed non significant relationship. Multiple regression analysis showed that 62 per cent variation in knowledge gain was contributed by the independent variables.

Correlation analysis of independent variables with symbolic adoption showed that five independent variables had a positively significant relationship



with symbolic adoption. One variable was negatively significant with symbolic adoption. Remaining five varied showed non significant relationship.

Multiple regression analysis concluded that 59.2 per cent variation in symbolic adoption was brought about by related independent variables as a whole.

The significant 'F' value indicated that all the treatments were effective in terms of knowledge gain and symbolic adoption. Students 't' test was carried out to compare the treatments. ICIV with 'Feature' mode of video presentation and ICIV with 'Skill demonstration' mode of video presentation were the most effective modes in maximising knowledge gain and symbolic adoption.