A Handbook of

COMMUNICATION

AND

THE COOPERATIVE TEACHER

Daman Prakash

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Cooperative Series 18

INTERNATIONAL COOPERATIVE ALLIANCE

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Cooperative Series 18

INTERNATIONAL COOPERATIVE ALLIANCE

CONTENTS

PREFACE

This handbook "Communication and the Cooperative Teacher" deals briefly with the principles and related questions of communication, and importance of various communication tools and then treats in a practical fashion the various methods of teaching and techniques of preparation of different types of teaching aids and their use. The handbook was originally written in 1971 by Mr. Daman Prakash, Assistant (A-V Aids), in our office. It has been used by him for conducting workshops on this subject at the All-India Cooperative Instructors Training Centre of the National Cooperative Union of India as well as in teaching cooperative educational instructors in field situations during visits to member education activities in several States of India. After we found that the handbook was of considerable practical value to the cooperative instructors in India, it was sent out to the member-organisations and national cooperative training centres in other countries in the Region for their use and for obtaining their comments and suggestions. Since the handbook was written, Mr. Daman Prakash has undergone a four-months training course in Communication Media conducted by the Centre for Educational Development Overseas (CEDO), London, (now a division of the British Council). The handbook, in the form in which it is being published now, incorporates the experience gained by Mr. Daman Prakash through his training overseas and the revisions made on the basis of reactions received by him while using it and the comments and suggestions received from the member-movements in the South-East Asian Region.

It needs no emphasis that selection of proper teaching techniques and tools are exceedingly important to a teacher in establishing the rapport with and communicating his ideas to the trainees. The importance of these become all the more great when a teacher is engaged in member education work. Although the present handbook will be of use to teachers in cooperative training centres also, the primary purpose of the handbook is to provide personnel engaged in member education with practical guidelines which would help them in carrying out their very difficult task especially in the context of considerable illiteracy prevailing in some countries of the Region.

The ICA Regional Office & Education Centre has been rendering in various ways assistance to the cooperative education work of the member-movements in

(i)

the Region. The publication of this handbook is a modest attempt to provide further support to member-movements in this task. We hope that the cooperative education personnel, especially those concerned with member education, will find the handbook useful.

It is our aim to improve the handbook further and therefore we shall be very grateful to those teachers and member educators who would send us their comments and suggestions.

J. M. Rana
Director (Education)

New Delhi,
October 2, 1974.

(ii)

INTRODUCTION

In any teaching-learning situation the role of audio-visual methods and materials cannot be over-emphasised. This assumes greater importance when we talk about the cooperative education and training activities. In the education of members of cooperative societies an instructor faces various situations. A majority of members of primary societies in some of the South-East Asian countries are unfortunately illiterate, yet they form a legal socio-economic organisation called the cooperative society. By virtue of their being the members of this organisation they have to perform certain duties and take care of certain legal formalities. Unless they are aware of the importance of their rights and duties, cooperative organisations cannot be true democracies. This makes the task of the cooperative instructors still more difficult.

Besides adopting the lecture method or face-to-face communication techniques, an educator has to rely on certain other communication channels. Audio-visual aids and methods, therefore come handy and they should be applied in communicating ideas more and more. The educators should, therefore, be given specialised training in communication methods and materials so that they could establish effective links with their audiences. They thus need training in communication methods, e.g. lecture method, study visits method, seminars and conferences method, study circle method etc. and in the production of communication materials e.g. posters, charts, flannelgraphs, plastigraphs etc. They have also to be acquainted with the operation, care and use of certain other equipments e.g. tape-recorder, cine and slide projector, overhead projector, camera etc. During the course of these training courses the instructors should be encouraged to produce simple audio and visual aids, learn their application and assess their effectiveness and usefulness.

The present handbook has been prepared keeping in view the tasks that the cooperative educators have to perform, the resources and materials available to them and the peculiar situations and audiences that they so often encounter. I have tried to make the handbook as simple as possible and included in it a number of illustrations and examples which might interest the users. The handbook could serve as a useful manual for those who might like to arrange training

courses for cooperative educators in communication techniques and may serve as a useful work-book for those who are interested in making simple teaching aids on their own.

In my opinion, the organisations which are happily incharge of education and training programmes, must (i) train their instructors in teaching techniques, (ii) provide a sufficient quantity of relevant teaching aids e.g. posters, flannel-graph, slide projector etc., and (iii) organise refresher courses at regular intervals with a view to inform the instructors of the latest trends in techniques and cooperative policies and programmes and to obtain from them the reaction (feedback) of the people towards the programme as a whole and towards the methods and aids used by them. The organisations must allocate sufficient resources to undertake the production of simple visual aids.

I will be failing in my duty if I do not acknowledge my gratitude and thank-fulness to Dr. S.K. Saxena, Director of the International Cooperative Alliance, London, for enabling me to branch out in this field and to Mr. P. E. Weeraman, ICA Regional Director for South-East Asia, for the inspiration and guidance he gave me and the opportunities he so kindly provided for my specialised training in this field which enabled me to attempt this modest work.

In the preparation of this handbook I have received encouragement, inspiration and guidance from a number of personalities and institutions. They include : Mr. J.M. Rana, Director (Education), Mr. Lionel Gunawardana, Joint Director (PPR) and Dr. D. Vir, Joint Director (Education) of the ICA Regional Office & Education Centre for South-East Asia; Mr. Amba Prasad, Principal of the All-India Cooperative Educational Instructors' Training Centre of the National Cooperative Union of India; the Centre for Educational Development Overseas (now a Division of the British Council), London; Mr. V.N. Pandya, Project Officer of the ICA-NCUI Cooperative Education Field Project, Indore; Mr. J.M. Mulani, Executive Officer of the Gujarat State Cooperative Union; Mr. Y.D. Deshpande, Principal of the D.R. Gadgil Cooperative Training College, Nagpur; and Mrs. Gabriela Lira de Gonzales of the A-V Communication and Audio-Visual Services, University of Chile, Santiago. My colleagues at the ICA Regional Office e.g. Mr. B.D. Pandey, Librerian and Mrs. Margaret D' Cruz, Assistant (Education), extended their valuable assistance to me by way of provid-ing relevant materials and ideas. In the production and layout of this publication

(iv)

I am thankful to Mr. A.H. Ganesan, Publications Assistant and Mr. Vijay Rawat for helping me in the typing of the manuscript.

It is my wish and hope that the cooperative educators and extension workers' community within the Cooperative Movement of South-East Asia would try to make the best possible use of this handbook. Any comments and suggestions from them would be most welcome.

Daman Prakash

I
Communication

Introduction

Anything which we need, we first feel about it and then we express ourselves. This expression can be achieved either through signs or speech or by writing. In order to be able to possess what we need, our signs should be meaningful. In other words, our communication should be effective, otherwise we will get "anything" instead of the "thing" that we need.

All means which are employed in the process of communication should therefore be clear enough to stimulate action. A poor communication will only bring a poor response.

Communication is important for everyone and at every stage. Communication is employed in the process of learning and teaching. In order to satisfy our demands, we have to rely very heavily on all available channels of communication.

The importance of communication in cooperative education and training, adult education, health education, farm guidance, etc., cannot be overlooked. The illiterate farmers have to be informed about the use of fertilisers, high yielding varieties of seeds, utilisation of warehousing facilities, utilisation of small irrigation facilities etc. This cannot be done by handing over printed literature to them. They have to be shown the application of fertilisers by taking them to the demonstration farms or even by showing them well-produced films and other such visual aids.

According to Edgar Dale, "Communication is a two-way sharing process, not a movement along a one-way track. To communicate is to make an idea common to two or more persons."

The analysis of the statement will mean that (1) the communicator himself should be thoroughly acquainted with what he is going to teach, (2) the receivers —audience—should be equally interested in what is going to be taught to them, and (3) the process of stimulation should be heavily relied upon by the communicator. This situation is very appropriate when one communicator is involved with two or more receivers. The process is a two-way communication.

The Cooperative Educational Instructors and the Teachers of Cooperation in the various cooperative training centres have, therefore, to be fully acquainted with the various aspects of communication.

Before we deal with the various details of communication, it is proper to understand the principles of communication first.

Principles of Communication

Communication is comprised of three stages. Where instruction is involved, a fourth stage may be included :

Stage 1 : *Transmission*—Origination of a message may be by way of a signal. This signal could be in the form of a spoken word, a photograph, image or a chart. We may use radio as an illustration of communication. In this case, transmission is represented by the microphone into which the message is being fed. From here the transmission process commences.

Stage 2 : *Channel*—Now the message transmitted through the microphone is carried to the audience. This audience could consist of one person or a thousand people. For our purposes the message transmitted is carried to the audience through the wires, which are channels. These wires carry the sound impulses, and which also provide the power for the radio network. A teacher or a cooperative instructor will thus use his voice as a channel to transmit the message to his audience.

Stage 3 : *Receiver*—The message transmitted by the microphone is carried by the channels, i.e., wires, and brought to the radio set as such and in this process we listen to the radio. The message is being conveyed to the audience. It may, however, be noted that as soon as the radio is switched on, the message is being received by the radio set and relayed to the

audience, there may be someone in the room or not. If there is none in the room the message is not being received by the audience. The proper communication begins only when there is someone in the room to listen to the radio.

This makes our point clear that it is necessary that there should be two parties in the process of communication. There must be one to *originate* the message and the other to *receive* the message.

When we speak of *instruction*—either in the class-room or in the study circle of our cooperative, or even at the meeting of the general body of members—one further step is required.

Stage 4 : Follow-up or Feed-back—This is, infact, a process or evaluation. The idea is to find out how well the audience has received the message. This can be achieved by asking questions, or calling up reports or even by holding personal discussions.

BASIC PATTERN OF COMMUNICATION PROCESS
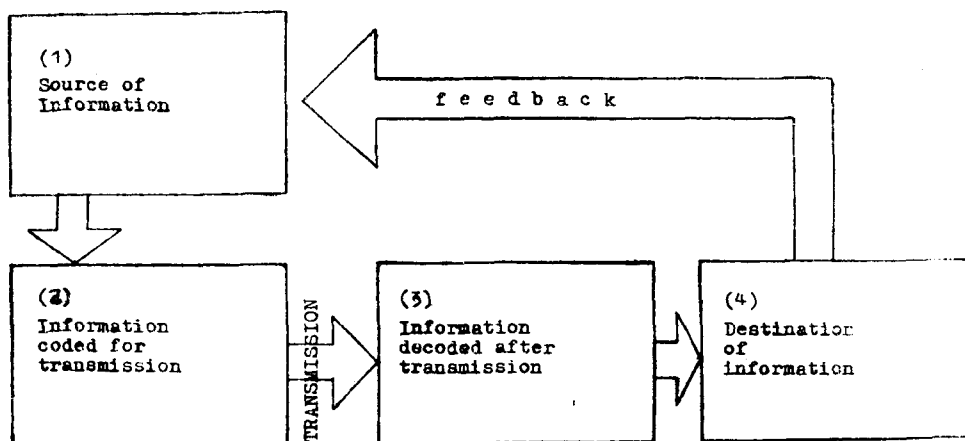
Source: Ken Garland's "Graphics Handbook", Studio Vista, London.

Communication in Process

Before we move to our area of discussion, it is important that we look at a few examples of communication in process.

A knock at the door...pause...reply comes from within, "Come in." A knock

at the door has proved to be an effective communication, because the action, "Come in" is its result.

A tinkle of the call-bell, if at home, makes one run to the door to receive the guest, and if at the office, makes the attendent run up to the officer for orders. Communication in process, properly explained.

You send out circulars to the members for a meeting and they come at the meeting place at the appointed time. Communication in process. Whatever be the message, the circular has acted as a link between the two, or perhaps between one and several others.

An infant wants milk. The child cannot speak or make meaningful signs, but his crying attracts mother's attention and thus an effective communication is established.

Factors Influencing Communication

To ensure that communication is established effectively, it is essential that *there should be a common experience.* Where common experience is lacking, effective communication cannot be possible. Several factors which influence the process of communication are :

1. age factor (we are young or old)

2. sex factor (we are men or women)

3. economic factor (we are rich or poor)

4. location factor (we live in a city, a suburb, or on a farm)

5. mental factor (we are bright, slow or average)

6. education factor (we are graduates or illiterate)

7. organisation factor (we are of this political party or that party)

8. vocation factor (we are teachers or farmers)

9. social factor (we are in the middle income group or in low income group)

10. racial factor (we belong or do not belong to a minority ethnic group)

This is not the complete list of factors which influence communication. There are several others but the above list includes only the major factors.

The *background of the student influences his receptivity to varied communications*. The teacher has, therefore, to keep his mind open and go about in his work keeping in view the factors which influence the process of communication.

Communication and Symbols

No effective communication can be achieved without effectively employing various types of symbols. These symbols can be "visual symbols" and "verbal symbols". Two examples of these symbols are given below :
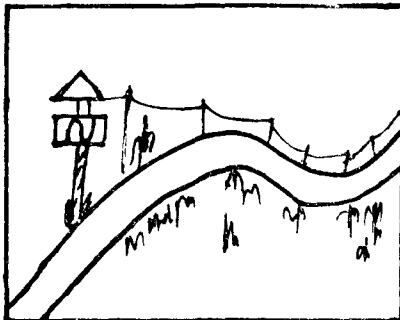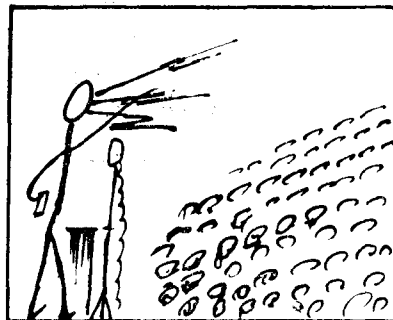
VISUAL SYMBOL   VERBAL SYMBOL

Photographs, sign-boards, charts, graphs etc. are visual symbols. Radio message, speech, spoken words are verbal symbols.

Road signs are communication in process. The message is conveyed through symbols. A majority of road users, here we mean motorists, are educated people. They can very well understand the written warnings about the road turns. But they happen to be in a fast moving vehicle and therefore it may not be possible for them to stop at every road sign to read it. Instead, road symbols have been introduced. These signs guide the traffic and lead the motorists back home safely. What happens if road signs are not observed by the motorists ! A disaster, an unfortunate accident !

Remember

Message : is the content of communication, the channel is the means by which it is transmitted. To send a message in human communication, some kind of symbols must be chosen. Examples : election symbols, road symbols.

Channel : is the mechanical means or device. It transmits the symbols chosen by the person who is attempting to convey meaning. In ordinary conversation, it is chiefly the human voice, for the reader of a novel, the printed book. The channel is normally referred to as printing, gesture, speech or broadcasting.

Response : Road symbols guide the motorists, and the motorists drive safely back home. Election symbols help the voters to cast their votes and the candidate to win (or even to lose). When there is a speech the response is in the form of applause or otherwise.

Where printed communication has not yet made any penetration, the camera makes the job a bit easier. A message which needed two or three pages could perhaps be communicated better through a single purposeful photograph, either in black & white or in colour.

How to Ensure an Effective Communication?

In order that the message, intended to be transmitted effectively, it is important that the *communicator* should be well-acquainted with the contents of the message. The receptivity of the message largely depends upon the fact as to what extent proper motivation has been achieved. The receiving end should be first made ready to receive the message. There should be full-scale channel available through which the message is to be transmitted. This is possible only when the two ends are ready.

To understand this better, the following two-way communication process could be examined :

WE PRODUCE MESSAGE BY	WE CONSUME (RECEIVE) MESSAGE BY
Speaking, singing, playing a musical instrument, and so forth.	←————→ Listening
Visualising through making films, photographs, painting, models, sculpture, drawing, graphs, cartoons, non-verbal gestures.	←————→ Observing
Writing or composing	←————→ Reading

Source : Edgar Dale's Audio-Visual Methods in Teaching, 3rd Edition.

To ensure that communication takes place effectively, both the parties should have a common aim. The parties concerned should be sympathetic to a common aim.

Cycle of Communication

The communication process in this context can be viewed in the light of the cycle of communication. The cycle has six major steps :

Expectation : No member will just walk in to be the member of a cooperative society unless he expects something out of it. A farmer expects the supply of fertilisers, seeds from the society. A consumer might expect regular consumer supplies from a consumer store. Each member thus has some expectation or the other. Before one actually becomes a member of the society one checks about things and finds out a number of details from friends and relatives.

Attention : With the expectation having been crystalised in his mind, he tries to see things more minutely and something there attracts his attention which makes him to decide about being a member. His emotions are thus aroused.

Emotion : A member becomes emotional, and sometimes sentimental. Emotional, because he can get the services which he would not have got elsewhere, and sentimental, because he is going to be a joint owner of the cooperative society and participate in its business and services.

Information : In what sort of business would he be involved, and in case he is involved in the activities of the society, what amount of work he will have to put in and what services would he get as a worker in the society and as its member. He naturally likes to collect as much information as possible about the society, its services and his own role.

Idea : Being fully equipped with the information he gives a final shape to his ideas and decides to be or not to be a member of the society.

Action : Having passed through all these stages, the cycle of communication completes itself with his application being considered by the managing committee of the society.

Of course we have said that the member will get himself acquainted with the activities of the society before he decides on being a member of the society. It is important that certain aids are made available to him through which he could understand the activities of the society clearly and quickly.

"Education" and "Training"

There is difference between "Education" and "Training". Everyone knows how to walk—the legs have been trained by an act of imitation or natural phenomenon—but many do not know how to walk gracefully or properly. Education, therefore, is needed to improve the style of walking. One can operate a cine projector without understanding the electrical and mechanical channels within the machine. This training has been achieved by the operator by observing the method of lacing the film and operating the bulb switch from a colleague. To educate him to run the projector scientifically it is important that all details of electrical and other systems within the projector have to be explained to the operator. When he handles the projector after receiving this education, we may call that he has been trained and educated in the operation of the machine. "Training is bad when it neglects or limits the possibility of increased growth and development".

A comparative panel designed by Edgar Dale on Training and Education is reproduced below :

Training Usually Emphasizes	Education Usually Emphasizes
Imitative reaction	Creative, imaginative, reflective interaction.
Short-range, limited goals and fixed ceilings	Long-range, broad goals with flexible ceilings.
Fixed means : inflexibility	Variable means : flexibility.
Memorization, repetition	Thoughtful practice and application.
Unexamined conformity	Thoughtful conformity and non-conformity.
Limited sharing of ideas and feelings	Unlimited sharing of ideas and feelings.
Learning by prescription	Learning by thinking.
The dependent learner	The independent learner who has learned how to learn.

Cooperative Education is an Adult Education

The cooperative teacher has, therefore, to keep in mind this difference and devote his fullest attention towards the education of members and cooperative officials in handling the affairs of societies in the most proper way. Again, there is a problem for the teacher. His audience is essentially a grown up audience. Adult students have to be handled in a more scientific manner than the school pupils. Both are different categories. Both need constant guidance, sympathy and encouragement. The main difference is that a child can accept an imposed discipline while the adult group would never tolerate such a thing. Despite the remarkable politeness of the adult student, he is more likely to become vocal if the depths of a poor teaching situation are plumbed. Adults can revolt faster when their problems are not solved to their satisfaction.

An illiterate member of a cooperative society often becomes a comfortable cushion for a few clever members in a society. They try to obtain his consent and/or signature to achieve their own ends. To be an illiterate person is one thing and to be a member of the society is another. Illiterate, does not mean that he cannot think and speak. He is blind only so far as "written words" are concerned. His sense of discipline, his rights of being a member of a society, his sense of belonging to the society as a whole, remains awake and alive all the time.

The cooperative teacher has, therefore, to start from here and not from "teaching him alphabets". The teacher should clearly understand how to handle a grown up member in comparision with a child at school. Adult students can be of two categories—the ones who would like to learn and those who need to learn. The first ones would learn faster while the latter would "oblige" the teacher and his organisation and would need to be compensated in some form or the other. Adult members are mature while children are not. Ideas can easily be communicated to mature minds.

II

Teacher—A Cooperative Teacher

Teacher—A Cooperative Teacher

After having discussed communication, its process, principles and various other aspects, we now come to the most important factor which helps in the process of teaching and the role communication process plays in his activities as a teacher.

A teacher who is to teach has to be a good communicator. He, of course, should be cooperative, besides being involved in the education and training programme of the cooperative movement, which again makes him a cooperative teacher i.e., cooperative educational instructor or a lecturer at the cooperative training centre or college.

A teacher should, besides having complete knowledge about his subject, have the following qualities :

1. He must possess a good and pleasing personality.

2. His voice should be clear and understandable.

3. Preparations to present his subject.

4. Presentation.

5. His conformity with the level of his audience.

Teacher—A Good Teacher

There is no doubt that a teacher should be a good teacher. The teacher should be well-informed, well-aware of his subject, having good personality, and should be interested in the profession. The statement that *"anyone who knows his subject can teach it"* can be misleading. So is the belief that the method is more important than the subject matter. Every teacher needs to prepare himself in subject matter and in method.

There are certain *principles of good teaching that a teacher should familiarise himself with.* These principles are almost as important as the stimulation and inspiration of a good teacher.

These principles are :

1. Active learning

2. Many methods—adoption of the best one

3. Motivation

4. Well-balanced curriculum

5. Individual differences—slow/quick learners

6. Lesson Planning

7. Power of suggestion

8. Encouragement where it is due

9. Remedial teaching where it is necessary

10. Democratic environment

11. Stimulation

12. Integration, synthesis

13. Life-like situations

14. Independence.

What characteristics the teacher should possess and what he should not possess :

Desirable

1. Good physical health and personality.

2. Above average intelligence.

3. Creativity, imagination and resourcefulness.

4. Good grooming, poise, refinement in voice and action.

5. Courtesy, kindness, sympathy and tact.

6. Patience.

7. Sincerity and honesty.

8. Firmness.

9. Promptness, efficiency and ability to organise.

10. Positive and encouraging attitude.

11. Democratic leadership.

12. Professional status.

Undesirable

1. Superiority complex, arrogance.

2. Inferiority complex, insecure, defensive.

3. Imperfect voice, shrill, harsh.

4. Ill-mannered.

5. Insincere, dishonest.

6. Unfriendly, unsocial.

7. Disrespectful of the opinions of others.

8. Lacks imagination.

This is a long list and all the undesirable characteristics cannot, therefore, be enumerated.

Some other indications of a poor teacher are :

a. Plays with chalk or some other object while teaching.

b. Leans on the furniture, moves back and forth.

c. Misinformation.

d. Using very few teaching aids.

e. Sticking to only one method of imparting instruction.

f. Does not answer questions.

g. Does not evaluate his work or that of his students.

In order to be an effective teacher and then to be a good cooperative educational instructor, it is important that some methods of teaching which are in vogue should be carefully understood and tried. There are various types of teaching methods for various situations.

Experience—A Rich Experience

People say that they have a long experience of working with the cooperative and other such organisations. They seem to mean that they know everything about cooperatives and that they cannot be wrong about their thinking about cooperatives. One might have worked with a cooperative for a period of 10 years and thus have acquired a long experience. But does it mean that he has known everything about cooperatives, and that too about all types of cooperatives? No. He might be aware about his credit cooperative society in a greater detail, but may not know much about "consumer cooperatives".

To know more about consumer cooperative, it is necessary that an individual studies the working of a consumer cooperative himself by visiting it, or by looking at some photographs and documents. He has even to meet some of the members of that society and hold discussions with them. By doing so *he gets involved intimately with the working of the society. He attains "rich experience".* This "rich experience" is therefore important which is the direct result of an effective communication. It is from here that the learning picks up.

There are several factors which make an experience *especially memorable and richly rewarding.* When we develop some general ideas about our various specific experiences, we begin to see that they possess one or more of the following

characteristics :

a. The senses may be strongly involved,

b. There is a quality of novelty,

c. A marked emotional tone may be present,

d. A rich experience is often the culmination or fulfilment of other experiences,

e. A rich experience carries with it a sense of personal achievement,

f. One rich experience can generate a new experience.

This experience, as mentioned above, can be obtained by employing various methods. One of them is "seeing" or by employing "visuals". These visuals are chalkboard, flat maps, diagrams, charts, graphs, etc.

Teacher's Tools—Audio-Visual Aids

Audio-visual or visual sensory aids help our senses of the hearing and seeing to enable us to learn effectively and efficiently. Through these aids the process of learning gains speed. They help in the process of communication. Audio-visual aids are today being employed increasingly in all processes of teaching. The use of these aids is not a new concept. These have been in constant use. The great paintings in caves, temples were created to achieve an effective communication.

Another example of the use of teaching aids is the use of slates or sand-boards by the monks and teachers in the educational institutions of the past. Even today one can find the slate being used quite extensively in schools.

Learning process gains speed only when the instructional material is simple, effectively and properly illustrated. These illustrations are extremely important for beginners. It is said, "One picture is worth a thousand words". Use of symbols is thus as important as the text itself.

Learning is a process in itself. Our intention here is to make a general mention of this process. To achieve "learning" or "better learning" we have to

apply certain techniques and materials. Learning in fact reflects the total personality and results in one's actions and achievements. There takes place an interaction of various elements in achieving learning. They can be grouped into four elements e.g., need of the learning, experiences to satisfy these needs, incorporation of experiences into existing knowledge, and how to make the best use of these experiences in sustaining the new things learnt.

That is what precisely is our aim in discussing the total sphere of audiovisual communication in the field of cooperative education and training.

III

Audio-Visual Aids in Cooperative Education and Training

Audio-Visual Aids in Cooperative Education & Training

We categorise the cooperative education and training process in the following two ways :

1. Cooperative education imparted at the school level and which continues to be imparted upto university level as per recognised syllabus.

2. Cooperative education imparted at the Cooperative Training Centres or Colleges for the cooperative personnel belonging to the Cooperative Department and the Cooperative Institutions. This is an in-service training in order to enable the participants to increase their efficiency and managerial skill.

We are concerned with the latter. Of course, we have another aspect which is related to Cooperative Member Education, where the members and office-bearers of cooperative institutions are involved. The idea is to make the members realise the importance of their cooperative society, their own contribution in its development, their own rights and responsibilities as members or managing committee members or other office-bearers.

Essentially both aspects are within the scope of adult education and therefore the element of teacher-and-the-taught does not fit in. Here the teacher is one of

the participants and for the entire group the process is "life-long learning" and not a "terminal learning".

We, therefore, select the teaching aids, or the audio-visual aids for this group.

Classification of Audio-Visual Aids

The basic element of the visual aids is their pictorial content. They present the subject-matter mainly through the medium of pictures and sketches. Thus they facilitate the formation of mental image so basic to learning.

Audio-visual aids can be classified in a number of ways. These can be :

SPEED-WAY CLASSIFICATION

Symbols (verbal)	S	Symbols (visual)
Pictures (still e.g. film-strips)	P	Pictures (Movie, TV)
Experiences (direct, journey)	E	Experiences (contrived through models etc.)
Exhibitions	E	Excursions
Demonstration	D	Dramatisation

CONE OF EXPERIENCE

Verbal Symbols
Visual symbols
Recordings, Radio still pictures
Motion pictures
Educational TV
Exhibits
Study Trips
Demonstrations
Dramatised experiences
Contrived experiences
Direct Purposeful Experiences

18
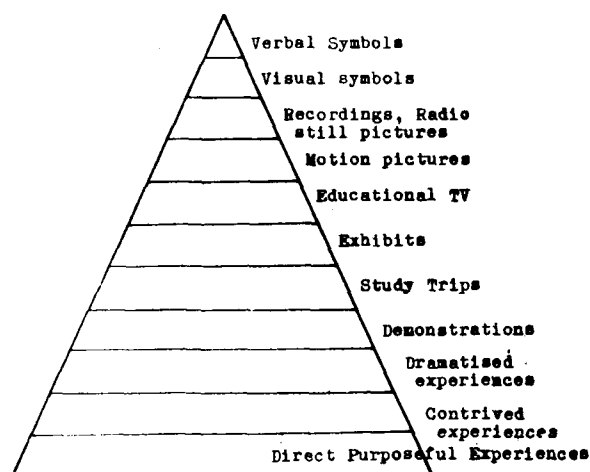
Cone of Experience Classification

This is also known as Edgar Dale's Cone of Experience.

The cone suggests the application of various methods of communication to achieve a "rich" or "direct purposeful experience". The learner has to be exposed to various experiences to enable him to see more and more and understand things better. Verbal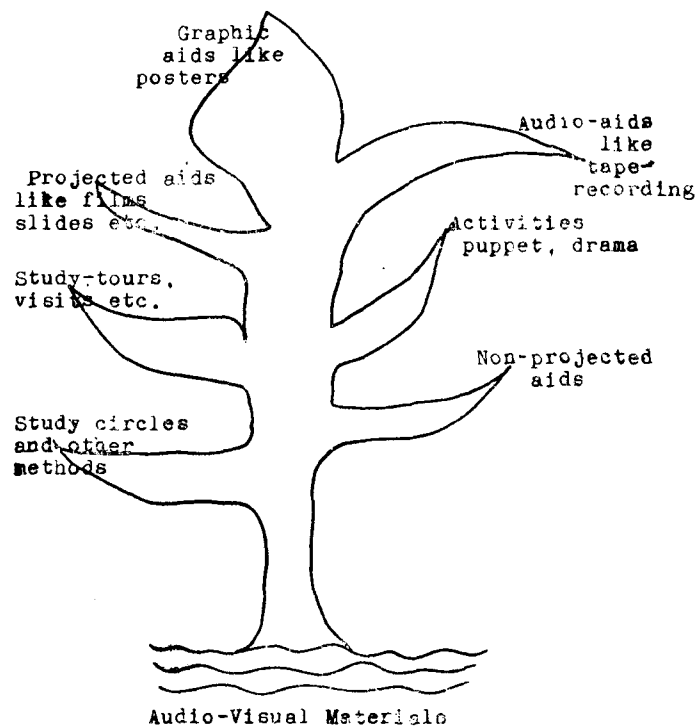s achieve only a limited experience. Motion pictures achieve a broader experience because there is a combination of "audio" and "visual" plus "motion". But when an individual is involved in a certain practical activity e.g. managing a consumer cooperative store, he not only gains direct and purposeful experience, but also learns more and quicker. "A rich experience is often the culmination or fulfilment of other experiences. Experiences that encourage continuing growth are of the first importance in concept development. Yet all too often we limit our capacity for creative change; or we may not be prepared for experiences that could be of significant value in helping us to map out our lives."*

TREE-WAY CLASSIFICATION

Graphic aids like posters

Audio-aids like tape recording

Projected aids like films slides etc.

Activities puppet, drama

Study-tours, visits etc.

Non-projected aids

Study circles and other methods

Audio-Visual Materials

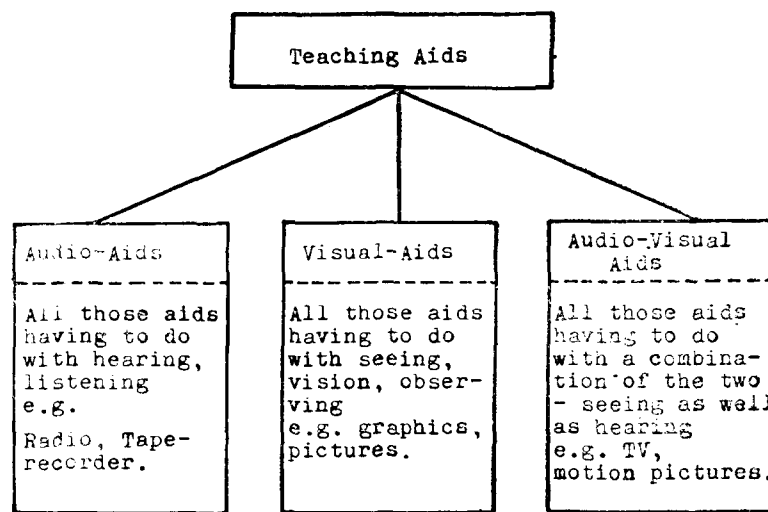
* *Edgar Dale*, Audio-Visual Methods in Teaching.

Another classification can be shown in the following manner, under which we catagorise audio-visual aids, visual aids, audio-aids and name them as "Teaching Aids".

CLASSIFICATION OF TEACHING AIDS

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                          ┌──────────────────┐
                          │  Teaching Aids   │
                          └──────────────────┘
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    │ Audio-Aids   │    │ Visual-Aids  │    │ Audio-Visual     │
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    │ All those    │    │ All those    │    │ All those aids   │
    │ aids having  │    │ aids having  │    │ having to do     │
    │ to do with   │    │ to do with   │    │ with a combina-  │
    │ hearing,     │    │ seeing,      │    │ tion of the two  │
    │ listening    │    │ vision,      │    │ - seeing as well │
    │ e.g.         │    │ observing    │    │ as hearing       │
    │ Radio, Tape- │    │ e.g.         │    │ e.g. TV,         │
    │ recorder.    │    │ graphics,    │    │ motion pictures. │
    │              │    │ pictures.    │    │                  │
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Audio-visual aids or the Teaching Aids have been classified by a number of experts in a number of ways. This was done mainly to suit the local conditions in which they were so placed. For instance, in countries like India, Sri Lanka, Nepal, Bangladesh, Indonesia, where projected aids e.g., films, film projectors, slides projectors, tape-recorders, overhead projectors, are expensive or are not available, educational experts have tended to rely on graphic aids like posters, charts, printed material, chalk-boards, etc.

We, therefore, classify these aids to suit our conditions. They are grouped under (i) Projected Aids, and (ii) Non-Projected Aids or Graphic aids.

IV

Teaching Methods

The following are a number of teaching methods which are in use in various places and under various circumstances :

1. Lecture Method
2. Case Method
3. Syndicated Method
4. Seminars and Conferences Participation
5. Book Review
6. Role Playing, Dramatisation, Puppet Playing
7. Incident Process
8. Programmed Learning
9. Project Method
10. Symposium
11. Panel Discussion
12. In-basket Technique
13. Business Games
14. Demonstration Method
15. Observation-cum-Study Visits
16. Sensitivity Training
17. Task Force Method

18. Tutorial System
19. Brain Storming Sessions
20. Debates
21. Quiz Competition
22. Planned Reading Programme
23. Coaching Method
24. Workshops
25. Executive Exercise
26. Counselling and Guidance
27. Correspondence Courses
28. Audio-Visual Aids
29. Exhibits, Displays, Cartoons, Comic Books
30. Student Participative Teaching Method
31. Guided Discussions
32. Study Circles
33. General Body Meetings or Conventions.

It is not necessary that all the methods are to be used by the teacher. Only a few of them have to be selected, tried and applied.

There is no hard and fast rule as to the application of method of teaching to a certain audience in a certain situation. Whatever technique is appropriate and acceptable to the audience should invariably be applied by the teacher. Cooperative educational instructors in India, for instance, are peripetatic units. They move from one village to another. They hold different types of classes e.g. classes for members of managing committees, office-bearers and other members. These classes are of different durations ranging from 3 days to 4 weeks. The composition of audience is never uniform from the literacy point of view. For such groups lecture-cum-discussion method could be the most ideal. Some time the audience is intelligent and literate. In such situations the instructors apply a number of other teaching methods and use several simple visual aids. But in class room situations, for instance in cooperative training centres, the composition of a class is generally homogeneous and the literacy level is reasonable. The teacher can apply various high-level techniques and use audio-visual aids like films, slides and even overhead projectors. The instructors and cooperative teachers have therefore, to select their own methods and aids.

Some of the commonly used methods will be discussed here. They are :

1. Lecture Method
2. Question-Answer Method
3. Project Method
4. Study Circle
5. Problem Method
6. Discussion Method
7. Symposium Method
8. Excursion Method
9. Field Trip Method
10. Programmed Learning
11. Role Playing
12. Micro-Teaching
13. Laboratory Method
14. Farm Guidance

1. LECTURE METHOD

It is a good and effective method for a limited group which has a higher level of understanding and literacy. It is the most widely used method. This is a one way traffic i.e., from the teacher to the students. The teacher has to do a lot of labour to be able to stand before the students to deliver a lecture. He has to read through a number of books and be prepared to answer questions.

A lecture, to be effective, should be prepared according to the well-established norms. There should be a proper lesson planning. The following essentials of a well-delivered lesson may be of some interest :

(i) Lesson notes should be well-planned, well-prepared and well-written. This helps in achieving confidence and clarity.

(ii) Enumerate the objectives of the lesson.

(iii) Use appropriate teaching aids and other teaching material wherever it is essential. Aids so used should be visible to the whole class.

(iv) Ensure that the students are well-seated and proper lighting and ventilation arrangements exist in the room.

(v) The introduction should be interesting and, if possible, dramatic to arouse the interest of students.

(vi) Write down the topic on the black-board and plunge into the subject at once.

(vii) In presentation adopt the right methods required according to the nature of the subject-matter. Involve the students as much as possible. The teaching-learning process should appear as a cooperative venture in which both the teacher and the taught are sincerely and actively engaged.

(viii) Use of black-board should be systematic and timely. Writing on the black-board should be legible, clear and bold.

(ix) It should not be a real one-way traffic. Keep on checking whether the students are coming along.

(x) Budget the time according to the steps of the topic. Never be in a hurry.

(xi) Be natural. Do not stand like a statue and do not speak like a tape-recorded signal. Do not lean on the table or the chair. Also do not dance.

(xii) Summarise the lesson and dictate important notes to the students wherever essential.

(xiii) Maintain the discipline of the class.

(xiv) Do not behave like a radio announcer. You should repeat points wherever necessary and where emphasis is needed.

2. QUESTION-ANSWER METHOD

The lecture method, examined above, can be easily broken into two parts i.e., (i) lecture, and (ii) question-answer session. The lecture which has been delivered can be followed by having a five minute question-answer session. You can invite questions from the students and answer them clearly, bravely and authoritatively. The questions posed to the students should be clear, understandable and within the scope of the lecture already delivered.

The questions could be directed to two categories : (i) back-benchers, and (ii) front benchers. Also the middle rows could be covered. Those who indicate their willingness to answer the questions should be encouraged to do so. Those who are shy about their being asked, can be encouraged by the teacher to solve the problem.

When the answers have been received, you can formulate a model answer so that all the students could understand as to how best the questions *should have been* answered. Do not snub those who offer wrong answers.

Another way of following this method could be that the teacher allocates a particular chapter to the students a day in advance. The students can come prepared to the class to answer questions. You should also encourage the students to ask questions from you as well. This helps in maintaining the communication process which leads to a better understanding.

Techniques of Questioning

An instructor might like to test his own performance as well as the receptivity of the audience. He might put a few questions and expect correct answers from the audience. What types of questions should be asked, is an art in itself. Just asking any question would not help. Some specific and well-balanced questions should be asked.

1. A teacher should try, during preparation, to answer his own questions. The instructor might like to word these questions suitably and might even seek answers to his questions from his friends and colleagues.

2. The questions should be asked in a logical manner. Pivotal questions should be arranged in a logical sequence to provide continuity to the lesson.

3. Check on the grammatical correctness of your questions.

4. Some of the questions should be really difficult and challenging.

5. The answers to the questions asked should be brief, preferably resulting into "yes" or "no" e.g. *Do you think that the cooperative society is an agent of the Government.*

3. PROJECT METHOD

A teacher can device a project and give its outlines to the students to formulate a full-fledged project. The teacher can ask the students to prepare an outline of setting up an "Audio-Visual Education Unit" in the Cooperative Training College. He can indicate the scope of the proposed unit. The students could then work on the project and its various details e.g., scope of the unit, equipment required, whether available locally, costs involved, personnel needed, space needed, its usefulness to the cooperative training college, to the cooperative movement, its services to the movement, etc.

The teacher only guides the students as to how the details of the project are to be worked out. The teacher can indicate the resources available for setting up such a unit i.e., space available, amount available, limits of the budget etc.

Similarly the students can be asked to prepare another project e.g., setting up a students' cooperative store in the College.

The students can learn more by project method and they get the feeling of themselves being involved. Again we find the communication process at work.

Already such a method has been usefully tried in various places where cooperative stores were set up by the students themselves. Given proper guidance by the teacher, this method can increase the understanding of the student very fast.

4. STUDY CIRCLE

Study circle is a small, closely knit group consisting of members of a coope-

rative society who meet at regular intervals to think, plan and act together to meet their common needs or to solve their common problems.
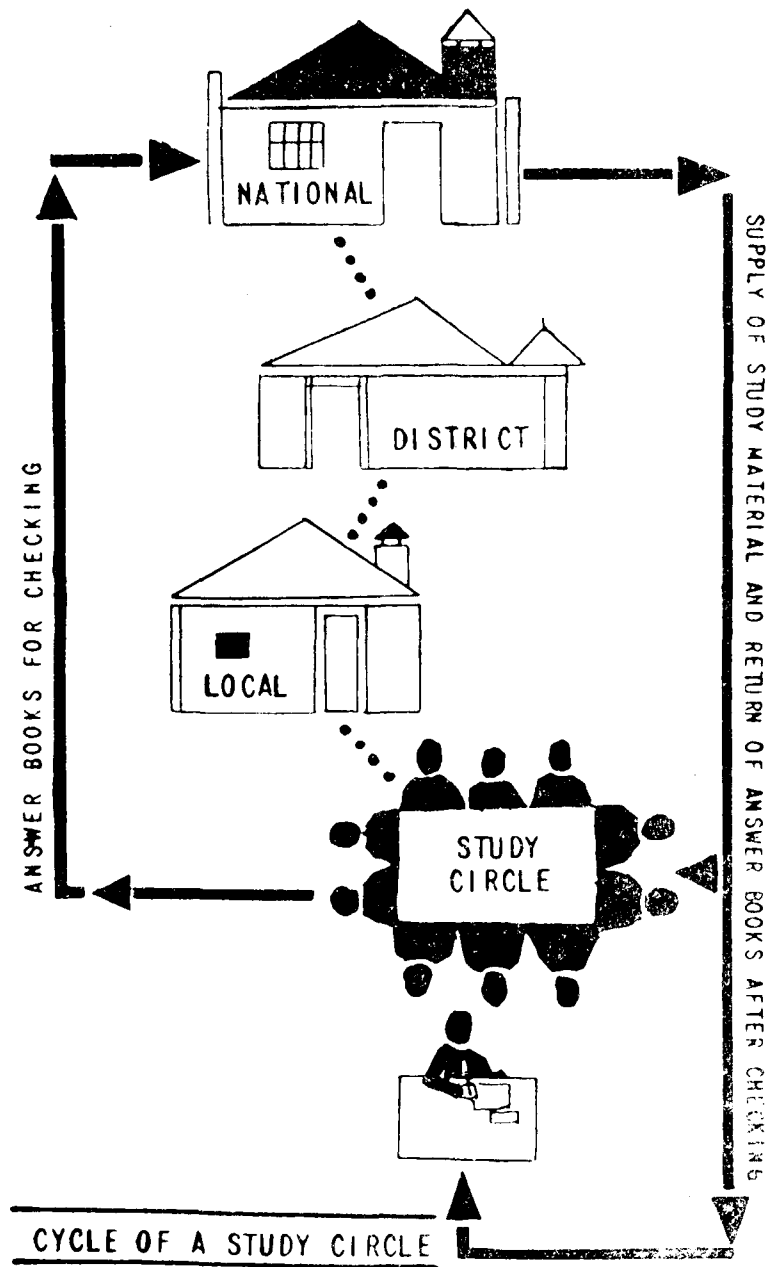
The groups are usually organised within the membership of each cooperative society; but may include potential members as well. The basis of the group is equality and mutual knowledge of each other.
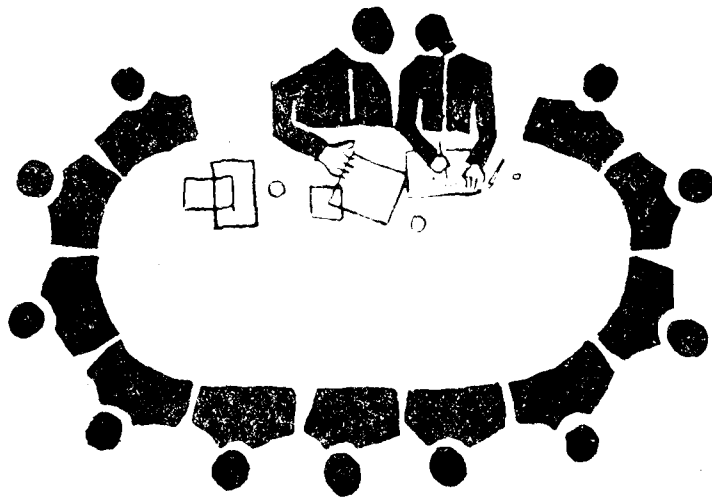
What to discuss

The object of discussion is to promote "Education for Action". Therefore, the selection of the topic or problem for discussion assumes great importance. Obviously, the subject chosen cannot be one which can or should be answered by consulting records or available facts such as : What are the principles of cooperation, or how much of the profit is to be set apart for reserve fund?

While selecting the subject, the interests, preferences, capacities, needs and knowledge of the participants need be taken into consideration. Usually, topics of current interest are preferred. For instance, the subjects selected could centre around the activities of the cooperative society or the occupations of the members for the pursuit of which the cooperative is established. Subjects like, "How to improve the functioning of the Society" "What should be done to ensure better services to members" and "How can we get more services from the Society" will not only lend themselves to good discussions but also to group action.

NATIONAL

DISTRICT

LOCAL

STUDY
CIRCLE

ANSWER BOOKS FOR CHECKING

SUPPLY OF STUDY MATERIAL AND RETURN OF ANSWER BOOKS AFTER CHECKING

CYCLE OF A STUDY CIRCLE

How does it function

The study circle as a method of education is capable of being used to various ends. Some aim at increasing the knowledge of their members and may be of an academic type. Others may have an immediate practical object; and are the means for members to study their common problems and discover ways of dealing with them. For instance, they may prepare the ground to lay the foundations of a new cooperative society, or where a society already exists, may serve to focus attention on some special development or new venture requiring the interest and collaboration of all the members. Yet others may develop as academic-cum-problem solving groups.

How to discuss

Just as the subject chosen for discussion is important, the manner in which discussion takes place is equally important. In order that the discussion should be meaningful, it should be kept practical and related to the problem in hand. The main problem should not be lost sight of among the small problems that might arise during the course of discussion. A logical order of discussion is :

(a) Why are we interested in the problem?

(b) What is the problem?

(c) What is to be done ? and

(d) What shall we do about it?

The discussion can be skilled, witty, and clever as well as profound, penetrating and informative. It can help to build healthy mental attitudes and appreciation and respect for one another. It brings about closeness of feeling and kinship among the members of the group. It can dissipate prejudice, suspicion, animosity and undesirable emotionalism and help to build up cohesiveness and integration. It has the inherent potentialities of creating the cooperative attitude, and give and take spirit. The reward of well-conducted discussion is truth, wisdom, understanding and sociability.

Who should make it successful

The success of the study circle depends on two factors. One is the study material or the discussion sheet containing information and posing problems for the members to discuss. The other is the resource person or the discussion leader.

The discussion leader should have the requisite knowledge and the capacity to direct the discussion towards fruitful channels giving each member an opportunity to express freely and frankly his opinion on the topic under discussion.

The role of the discussion leader is thus very important for sustaining the interest of the members and taking the discussion towards action.

Role of leader

In a study circle the leader is expected to open the meeting with a brief statement and guide the discussion.

He should see that all sides of a question are thoroughly discussed and explored and that a good balance is maintained between opposing views. At appropriate occasions he should call, attention to unexplored issues or points of view or summarise to conserve what has been accomplished.

When the occasion demands, he might suggest further discussion, reading or study which might be profitable in arriving at an appropriate solution to the problem.

The leader's function is that of doing everything possible to assist the group realise its full possibilities in the group thinking process.

The responsibilities cast upon the leader make it imperative that he should possess the requisite knowledge on the subject. He should be skilled in applying the art of conference leadership. He should be capable of guiding the discussion inconspicuously, and with general self-effacement to preserve the cohesiveness of the group which was formed on the basis of equality.

Qualities of leader

A good leader, is a participant and not an instructor; a guide and not a dictator. He should hold his own opinions in the background. He should be patient, self-restraining, objective, alert in mind, have knowledge of people and a stimulating personality.
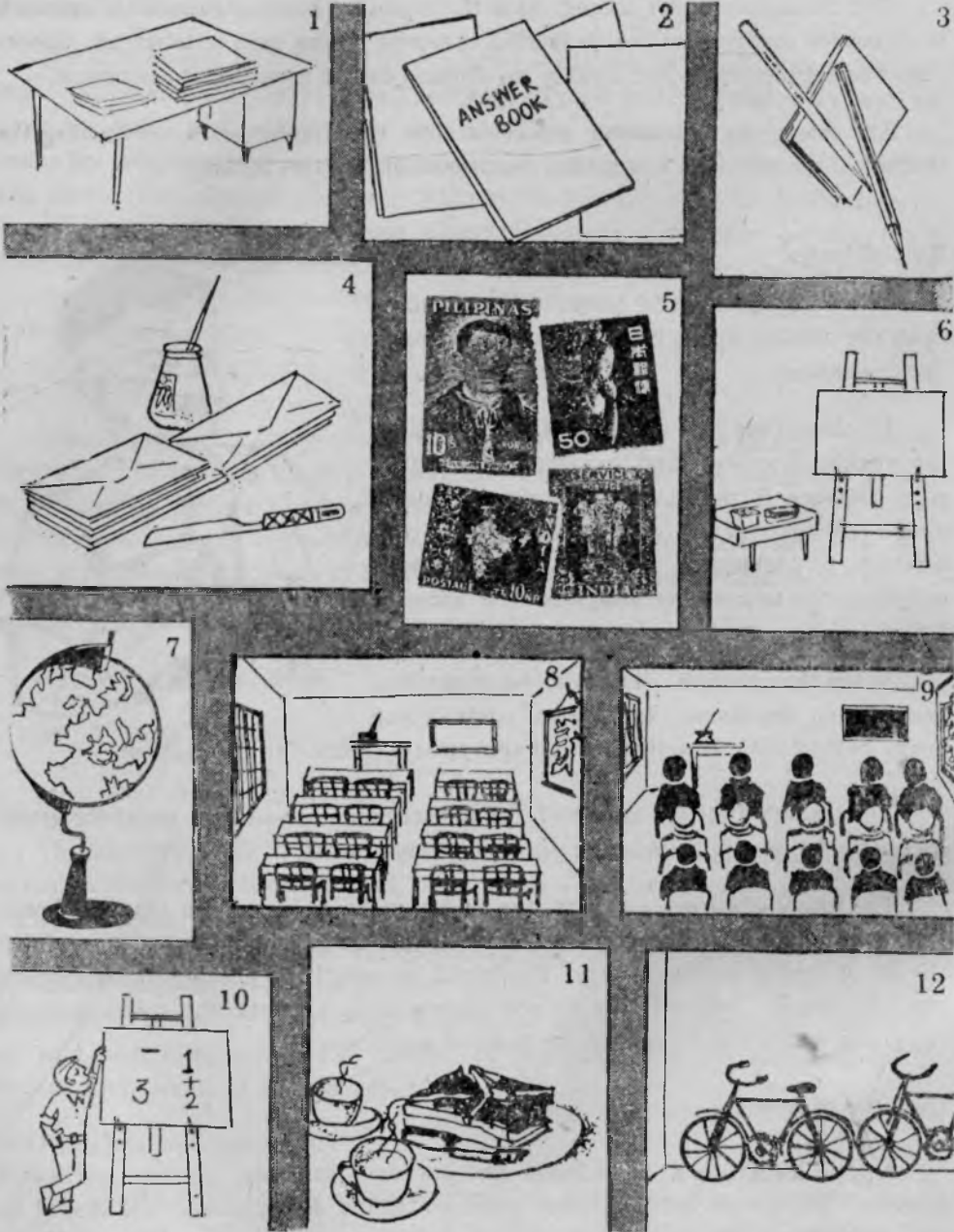
Requirements of a Study Circle Meeting

Factors for promoting good discussion

1. Meeting place should be comfortable to all.

2. Everyone should be seated at ease and in full view of the others.

3. The group should be neither too small nor too large.

4. All members should be acquainted with each other to establish informality.

5. The leader should state the problem clearly.

6. The problem should be meaningful to the members.

7. The members should know that they are expected to participate.

8. No member should monopolise time.

9. The leader should not force his views but frequently restate issues and summarise discussion and injecting humour in it.

10. The discussion should not be for too long a time.

5. PROBLEM METHOD

This is yet another very useful method which helps the students to learn effectively. Here the teacher poses a problem to the students. The problem selected should be directly related to the needs and working of the students. In this case the students who come into contact with the teacher are mainly connected with the cooperative movement. Problems could be, for instance, of marketing, of selection of appropriate variety of seed, of obtaining fertilizers, of auditing, of obtaining farm guidance etc. Any problem related to the working of cooperatives could be posed by the teacher.

In approaching a problem, the people generally (1) observe developments, (2) verify results, (3) check on the degree to which events repeat themselves, (4) carry on experiments to get the facts, and (5) come to conclusions about alternative courses of action.

The teacher can furnish the following details to the students :

1. Title of the problem

2. A brief background tracing the history of the problem

3. Various alternative solutions

4. Methodology of its solution

5. Time allowed for its solution

6. Suitable reference material

After receipt of these solutions from the students, the teacher can help solve the problem.

6. DISCUSSION METHOD

This involves a direct participation of students as well as of the teacher. The discussion is centred around a topical subject. Points of discussion are carefully chosen by the teacher and his colleagues. The points are then placed before the students. A proper background is first given to the students and then the discussion starts. The group, consisting of the students and the teacher and/or his colleagues, could elect a chairman and a secretary. The duties of the chairman could be to conduct the meeting in a proper manner, ensure an effective participation of all present. The secretary could take down notes and prepares a brief summary of the discussions. The chairman and the secretary could then, with the help of the teacher, work out the recommendations of the group which emerged out of the discussions.

Any point could be discussed under this method e.g., operation of the students' cooperative store in the cooperative college, need for holding annual refresher courses, need for conducting study visits, etc.

Purposes of post-listening discussions

Post-listening discussion has a very important place in a forum programme. It has a very valuable role in the process of communication. Transmitting a message by a word of mouth or through the medium of radio is not as effective as a well-conducted discussion. The form combines both the mechanical transmission of broadcast and the human exchange of views. Before we consider some guidelines for conducting discussions, we may think of the purposes of the discussions.
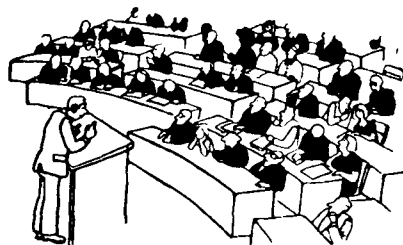
The following is a list of important purposes of forum discussions :

a. to furnish a gist of the information which some members may have missed because they arrived a little late or because they were inattentive or were disturbed part of the time;

b. to clarify ideas;

c. to enable people to learn from others' experiences;

d. to make people think so that they may learn better;

e. to give members an opportunity to make their contribution to group thinking;

f. to promote an attitude of democratic behaviour;

g. to sustain enthusiasm; and

h. to strengthen determination to take up action projects. Collective decisions promote a sense of security and move people to activity.

7. SYMPOSIUM METHOD

A topical subject could be selected by the teacher in consultation with his students and colleagues. A sort of seminar could be organised on that subject. Besides the students, teacher and/or his colleagues, a number of other people who have better knowledge about the subject could be invited to get together and hold discussions. The resource persons could be the people who are really acquainted with the subject and the latest trends in the subject. They could be requested to prepare brief notes which could be circulated among the participants in advance. The students could also be asked to prepare own papers or working papers. The teacher could guide the students in their preparation and presentation.
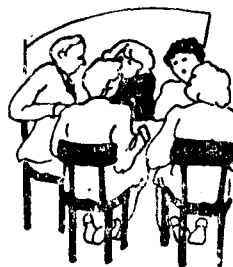
Suitable topics for such a symposium could be : problem of rural credit, problem of marketing, the role of cooperative teacher in bringing managament efficiency, the role of cooperative unions in the formulation of national cooperative policy, the role of village level workers in rural development, the role which the cooperative training centre could play in the development of cooperative

organisations. Resource persons could be invited from the cooperative banks, Reserve Bank, State Bank, Marketing Federations, Extension Departments National Cooperative Union, International Cooperative Alliance etc.

The method helps in bringing together a number of people of different opinions. The students would be in a position to know how others feel about a particular problem. Various view-points are placed before the students. The teacher can help the students in summarising the proceedings.

8. EXCURSION METHOD

This, in fact, is a sort of refreshment which is given to the students after a hard task. After working in the class for a long period, the training centre could arrange a visit to some information unit. It can be combined with a picnic. The students can be taken to a nearby cooperative departmental store for a visit. The visit could be planned well in advance. The areas to be covered and with what objective have to be decided. The students can have their lunch or evening-tea at the super market cafeteria.

The students can as well be taken to an exhibition. This visit will enable the students to see the exhibits, working models, maps charts, demonstrations etc., displayed at the exhibition. The visit could be related to the subject being taught to the students. This visit will bring a rich experience to the students. The teacher is always there to satisfy the queries of the students.

A number of training centres often organise such excursion visits to a number of places of importance.

This can be called a treasure-hunting expedition. The teacher has to be a guide. One of the students could be given the position of a leader of the group to work out practical details e.g., travel programme, night halt, food, where and what to eat, first-aid facilities, etc. Such visits inject leadership qualities and keenness to know about things.

According to Keith Jackson there are a number of broad objectives which are common to all kinds of student activity outside the classroom. These are :

a) The reinforcement of classroom learning.

b) Assessment and evaluation both by the student himself and the teacher.

c) Feedback to the teacher, so that his own teaching may improve.

d) Learning of new information and skills.

e) Increased attention to the needs of separate individuals and groups within the class.

The most common forms of activity are :

a) Individual work.

b) Small groups and project work.

c) Class projects, exhibitions, surveys and histories.

d) Class visits.

There are also approaches to adult education, including self-supporting classes and work with autonomous groups, which are more independent of class-room teaching.

9. FIELD TRIP METHOD

This method differs a bit from the Excursion Method. Here the trip is taken with a particular objective in view. It is not merely going to the field and coming back. So often it is confused with Excursion Trips.

Students could be taken out on a field trip under an organised programme of the training centre under the leadership of the teacher himself. A problem is given out to the students. They are expected to conduct a survey and present a detailed study-report to the teacher. The teacher, in this case, does the following:

1. Identifies a problem related to the student's needs.

2. Locates the area where the study is to be made.

3. Distributes detailed outlines of the study among the students in advance.

4. Distributes a questionnaire to the students.

5. Leads them to the place of visit.

6. Helps in locating the right persons who are to be contacted.

7. Helps in filling in the questionnaire based on interviews and checking of records.

8. Helps the students to work out a report.

9. Discusses the report with the students.

10. Presents a model report to the students enabling them to learn the techniques of such studies.

Topics for such visits could be, e.g., why village Rampur has been able to develop a minor irrigation system, with no outside assistance, while its neighbour Alipur, despite receiving outside money and assistance, could not do so, or why auditing of accounts of the Rampur society took three months to complete, etc.

Such exercises help the students in learning the process of identifying problem areas precisely.

The educational value of study trips

Why is study trip a good method of learning? What are its special values for students? What are its underlying educational principles? According to Edgar Dale the key points are :

a) Wide range of application.

b) Meaningful response.

c) Planning for insights.

d) Planning for selective observation.

e) Changes in attitudes and insights, and

f) Developing school-community relations.

10. PROGRAMMED LEARNING

In the process of teaching, this method could be effectively employed. The cooperative instructor could broadly outline a subject for his audience and indicate to them the steps according to which the subject has to be learnt. There are various steps which should be followed. These steps are governed by well-

defined principles. The instructor could help the audience as and when his need is felt by them. Most of the exercise is otherwise done by the participants themselves.

Principles of programmed learning are given below :

1. Principle of Small Steps

2. Principle of Active Responding

3. Principle of Immediate Confirmation

4. Principle of Self-Pacing

5. Principle of Student Testing

In the early stages of learning a subject, participants often make many errors. When a participant makes many errors in learning, he often develops a disliking to the subject. But this is disappointing. Without making errors it is difficult to learn effectively. For a long time, educators and people in general thought that it was impossible to learn without making a large number of errors. This was termed as a method of "trial and error" learning. Recent developments have, therefore, brought in a process called the "Programmed Learning". The material has to be arranged properly, effectively and scientifically—or programmed—and the participants can master the subject without making a large number of errors.

The five principles of programmed learning are discussed below :

A. Principle of Small Steps

The students learn step by step, and these steps are also small. Each step does not cover much of information and details. The student must understand well what he actually learns. This is possible only when he is given smaller doses of knowledge at regular paces. His mind is not overburdened.

B. Principle of Active Responding

The students learn best if they actively respond while they are learning. There should be some amount of comprehension. The understanding developed by the student should be sustained. The interest of the student must be maintained. By following small steps, the student achieves more than what he could if big assignments were to be given to him at once. The understanding of a

certain point can be judged only if the student is able to respond actively to certain questions and suggestions.

C. Principle of Immediate Confirmation

The understanding and learning of a student will be faster and longer if he is able to confirm his answers immediately. Waiting weeks or months to obtain the correct answers discourages the student and the pace of learning gets slower. He should, therefore, have an opportunity or facility whereby he could check immediately whether he replied to the questions correctly or not.

D. Principle of Self-Pacing

There are people who learn faster, better and more than others. Some people have to read a passage several times before they actually get hold of the meaning. Some students do not follow the teacher in the classroom because their comprehension and understanding was lesser than their colleagues. Each student has his own pace of learning and if the pace is faster, the learning is difficult for that student. The student learns according to his understanding, and this is governed by the principle of self-pacing.

E. Principle of Student Testing

This is regarded to be the most important principle of programmed learning. While the above four principles are directed mainly towards the students, this particular principle is focused on the programmers, teachers and communicators. Each student who passes through the process of small steps, active responding, immediate confirmation and self-pacing, leaves behind a record of his achievements. He responds to various questions, he learns something more than what was included in the programme, and he commits several errors. So in the same way several other students have also behaved. They all have left behind a record. The teachers could, therefore, go through these records and check where the students made the greatest number of mistakes, and where the students failed to respond actively and where they missed their pace. Such steps could be corrected by the programmers for future groups of students who will be subjected to programmed learning. Therefore this correction of programme could be termed as revision of the programme on the basis of student performance.

The principles of programmed learning could be usefully employed by communicators in cooperative and extension fields in various ways. In cooperative

member education programme, for instance, these principles could be employed to make the members aware of the steps to be followed in conducting a general body meeting, holding a managing committee meeting, or even distributing profits in a society.

11. ROLE PLAYING

Dramatization plays an important role in communicating certain ideas to a certain level of people. In rural settings in most of the South-East Asian countries, folk dramas, folk songs and folk art is a part of life of people. Indonesia's Ramayana plays are world-famous pieces of art. Similarly in India, rural entertainment groups can be found in almost all the states and the people patronise them in large numbers. "Nautanki" in North India, and "Tamasha" in Western India are a few instances.

Role playing as a technique of learning and teaching is, therefore, an important one. Here we will discuss how it can be employed and what benefits we can derive out of it. We don't discuss this as a method of entertainment on a commercial level. We discuss this as a technique of teaching where the people are involved in the actual organisation of a drama, characterisation, dialogue, setting, approach to the climax of the theme and how the message can be communicated to the masses.

Role playing is a process in which an imaginary situation is created and dramatised and in which the participants involve themselves fully. Some complicated points which might not be solved through a process of lecture or a group discussion, could perhaps be solved by role-playing. People are helped to develop an understanding of other people's attitudes or to appreciate their functions in real life. This can be employed in the training of staff, office-bearers of cooperative organisations, rural communicators, development agencies and farmers' organisations.

Participants in the role playing sessions can play the parts of any of the following :

1. role of other people (for instance, Assistant Registrar of Cooperatives, Inspector, President, Treasurer, or of an ordinary member),

2. their own role in a different situation (for instance of a teacher or instructor under training taking a class, of a President conducting a managing committee meeting),

3. or both—a combination of the two.

The role playing session has to be brought in only when a problem which needs a careful explanation and where illustrations of real-like situations are necessary. Those interested in holding such sessions will find them extremely interesting. There will be a break from the monotonous lecturing in the class. The participants will feel relaxed and some amount of excitement, enjoyment, and fun will be added to the process of learning.

Objectives to be achieved

In order to achieve an effective communication and to obtain the fullest understanding of the point, the exercise should aim at certain things. The participants involved in role playing are, therefore, enabled to :

1. complement theoretical instruction with practical exercises,

2. acquire operational competence and skills,

3. learn by trial and error in a situation where mistakes do not matter. This, by far, is the best method of learning, doing it, committing errors (not deliberately) and then doing it again with improvements based on

the errors committed earlier. There is thus a scope for considerable improvement.

4. to see themselves and to assess their own performance objectively. "A person learns more from what he *sees* than what he *hears* and more still from what he "*does*."

Techniques

To obtain best results from the role playing exercise it is extremely important that the session should be very carefully planned. A whole team of organisers, actors, promptors, subject-matter specialists has to be created from among the carefully selected participants. Some of the important points are given below :

1. The class, audience or the participants will be your actors and audience. You as leader/tutor can be a good leader/director or a stage manager. Remember you are the one who is to communicate your point to the audience.

2. If your group is large, ask for volunteers to play certain roles.

3. In case the group is large and the actors are to be a few, say 20 people in the group and you need only 4 persons as actors, it is necessary for you then to have a stage where the actual role playing will take place. So you will have to pull up some chairs away from the main audience, so that the actors could sit in these chairs and play the little drama that you have created on the subject for the class.

4. The leader/tutor has then to tell the class what the drama is all about. He has to indicate that the drama will be an imaginary situation and the participants will have to take it that way. In case you are going to take a point about the managing committee meetings and what role the President has to play, the situation must be clearly indicated to the total group. We have 7 people in the group, for instance, including the President himself. Except the President and the Secretary of the Society, rest of the five members are illiterate. They can hear and speak. They cannot read and write. This situation must, therefore, be communicated to the group before they actually start their role playing.

5. More realism could be added by letting the participants sit on the floor, putting on farmers dresses, holding papers like any villager would do,

and talking in the most irregular style, exhibiting arrogance, speaking out of turn etc. etc.

6. Then the participants should be made to understand their roles properly. The person who is to play the President, should be told how he has to play the role, what qualities are to be clearly shown in the President. Other participants have to be told how they would participate, individually and collectively. The role which the Secretary has to play, must also be clearly chalked out for him. There may be written dialogues or verbal, it does not matter. What actually matters is that the discussion should go on in a proper direction to achieve the desired result. The discussions should not be allowed to go rough.

7. When the orientation of the playing participants is over, the tutor should indicate to them as to when to commence and when to stop. If the tutor wants them to stop somewhere in the middle of the play, the group must be informed of the method that will be employed by the tutor. The tutor could use terms like "curtain up" to commence the role playing exercise, and "curtain down" to end the play.

8. All things ready, actors ready to go, complete silence in the class, the tutor could join the class and sit there. From there he can say "curtain up" and the play commences. When he wants the play to stop, he would say "curtain down" and the play should end. When the play is on, no one outside the playing group be allowed to comment, remark, laugh, or suggest anything to the playing members. For this purpose, we have a tail session, in which such discussions could be held and the actors appreciated for their work etc.

9. Remember, we are not professionals. We are not going to put up commercial or entertainment plays for the consumption of outsiders. We are doing it for our own benefit. Therefore, there is no need of any rehearsal.

Assessment

The participants after playing these roles could go back to their seats in the class. The tutor could discuss step by step the stages of the role play. He can point out what are the basic flaws in the real situation and what ideal situation it should have been. He is thus able to emphasise the point and compare what

were the good points and what were bad points. In conclusion he could indicate the right points, the situation as it ought to be.

In this assessment, the tutor/instructor could involve the role playing participants and other members of the class. Discussion could then be generated and certain conclusions achieved. The exercise could thus provide an excellent technique of teaching in a number of situations.

Some of the questions which the instructor/tutor could ask from the role playing participants could be : "how did you feel when you were placed in such a situation", "how important did you feel to be a President of a society", 'what was your reaction to the behaviour of the other members of the managing committee", "how was your President behaving", "did you take down notes", "what should have been the correct role of the President" and so on. The results will be surprising, informative, educative and meaningful.

Conclusions

1. It is an excellent exercise in communicating ideas more effectively.

2. It adds fun to learning.

3 It can be applied to various situations and at different levels of understanding.

4. The tutor can coat his subject in the pill of local folk-theme.

5. It can be used effectively in lecture or seminar sessions e.g., to bring out a point or reinforce "verbal" instruction.

6. It does not take long to prepare and more time to play. The duration of role playing exercise could be within five minutes.

7. Role playing sessions could be held on a continuing basis. A small group of participants could be assigned certain roles around a subject which could be studied for a long time. The role playing characters could appear in the class every time the subject is discussed.

8. An ideal tool for all extension workers engaged in the cooperative movement, community development programmes, family planning projects and so on.

12. MICRO-TEACHING

The following three aspects are discussed under the Chapter :

A. Micro-Teaching,

B. Role playing, and

C. Inter-action Analysis.

A. Micro-Teaching

This is designed to develop new teaching skills and approach and refine old ones. A trainee-teacher teaches small group of students on one single aspect for a period of 10 to 15 minutes. His teaching is video-taped or recorded and played back to him under the supervision of a trained supervisor. The trainee is able to watch himself teaching. He is able to pick up his good and weak points. He is able to correct himself. He plans his lessons again, teaches again and looks at himself again to check improvements. Some of the characteristics of micro teaching are :

i) It permits an objective observation of an individual;

ii) It demonstrates one single skill in a teaching process;

iii) Students find their own faults and propose their solutions themselves;

iv) Poor comments help the students and planners to remodel the process itself;

v) The core of micro-teaching can be demonstrated in the first 20 minutes or so; and

vi) Importance of verbal, non-verbal and extra-verbal cues in communication. Micro-teaching highlights these and lets the trainee feel of the extent to which these cues help in teaching.

There are various advantages of micro-teaching which might be of use in our respective areas of work. They are :

i) In planning micro-teaching we have (a) sequence, (b) contents (c) performance of the process; and (d) proceeding of the process.

ii) Micro-teaching helps in the training of communicators.

iii) It helps develop interaction skills.

iv) It helps analyse behaviour.

v) It encourages teaching-learning performance.

vi) It encourages closer contact with the teaching staff.

vii) It helps student-teachers to analyse themselves.

viii) It helps in thinking about problems concerning attitudes of children and parents when they appear during the class or as a result of the class.

ix) By asking leading questions e.g. what a trainee thinks about his former teacher. Such questions bring better appreciation of his own role as a communicator.

x) It involves in-training preparation of teachers and supervisors to analyse properly individual differences, evaluation, replanning, reteaching, re-evaluating on some of the steps to be followed.

xi) It is an excellent aid for teaching and learning with a lot of fun.

Equipment and Utilisation

The process calls for a video-tape recorder, and/or tape recorder, and pre-supposes its proper use, proper storage and proper labelling and to get acquainted with resources available.

Micro-teaching permits analysis of the whole course of education based on sequence of micro-teaching units.

B. Role Playing Technique

Role playing associated with micro-teaching presents a new line of communicating effectively with people in perspective. The techniques highlights the individualism of man and his capacity to be a part of a group. It is an experience in itself for us to identify ourselves as individuals and as a group.

This technique involves the following activities :

i) Personal work, interviewing, questioning and evaluating;

ii) advantages of working with small groups and individuals;

iii) when joined together with micro-teaching, it has the advantage of following the time table more accurately; and

iv) when taking the group as a whole, the process of discussion leading to conclusion takes the following steps into account :

    a) Forming;

    b) Storming;

    c) Norming; and

    d) Performing.

Role playing helps in the development of understanding of attitudes, values, concepts and motives. The feedback which one receives while acting in a group automatically sets a firm ground for the participant to stand on and take a positive position to put his case forward or to defend himself.

Role playing encourages to understand and interpret one's own role.

Reversal Role

By assigning a reversal role to an individual contrary to his views, personality, status and background, we can bring in him a revolution. This helps him in taking into account others point of view because 'only the wearer knows where the shoe pinches'. In the process of training teachers this aspect is very important.

Planning and Needs

The role playing technique has to be planned properly. The group has to go about as a unit and then the individuals as individuals in the group and then the group vs. the individuals. Observers can make a proper analysis of the group dynamics objectively.

We need a video-tape recorder and/or a tape recorder, a couple of tapes and of course their operation and storage. We have to have a trained supervisor to help in assigning the role and analysing them when playing them back to the group.

C. Inter-Action Analysis

This is a simple systematic observation of teacher-pupil behaviour in a teaching situation. Interaction analysis makes, by and large, the following assumptions :

a. Personality;

b. Emotions;

c. Feelings; and

d. Judgement of attitude of other people.

The analysis brings home to the trainees and students to what extent they are teachers as teachers and students as students. A supervisor uses an analysis form while the class is in progress. He checks a box on his form every three seconds taking into account the teacher, his subject, his response to students' questions and also covers to what extent the students are coming along while the teacher was going ahead with his talk.

The analysis is done on a category basis and the form of checks or marks in boxes reflect the teacher's approach and understanding of the students. The resulting string of numbers is converted into a matrix and tally counts and various indices of teaching behaviour are computed. From this we can infer :

a) the time taken by the teacher in the class;

b) the time taken by the students;

c) ratio between the two;

d) information, response volunteered by the students; and

e) questions by the teacher and percentage of answers, encouragements from the teacher.

The system can be used effectively in lectures, classrooms and seminars. Lecturers and student-teachers can use it to analyse their own teaching or to compare different teaching styles within and across subject-areas.

The combination of micro-teaching and interaction analysis (e.g. BIAS— Brown's Inter-Action Analysis System) probably constitutes the most effective method of helping trainees to change their teaching behaviours.

Conclusion

By following the interaction analysis, the teacher can find his weak points, improve himself and subject himself to a greater interaction (communication coupled with feedback):

a) We can work-out an appropriate method of teaching, and

b) We can establish norms in a group and then perform the group activity more effectively.

13. LABORATORY METHOD*

In the traditional instructor student situation, it is assumed that one person, the instructor, has knowledge and that it is his task and responsibility to transmit it to the student. The instructor will thus lecture, explain and ask questions. The students will listen, take notes and eventually reply. In a laboratory it is assumed that the knowledge will be discovered by the student operating in a group. The task of the instructor is to create situations wherein the student experiments with his ideas, gains experience and draws his own conclusions. To achieve this, a student should :

— observe and see what is happening in the group,

— consider possibilities of action which may be helpful to the group or to himself,

— get involved in what is going on, e.g., he may put forward a suggestion, make a joke, express approval or disapproval and adopt an attitude of expectation,

— get "feed-back" by seeing how his conduct influences the group and its individual members,

— draw conclusions about group inter-action.

14. FARM GUIDANCE AS AN EDUCATIONAL PROCESS**

Method and Techniques

Farm guidance is an educational process for the member-farmers who participate in a business programme to improve their economy. The selection of

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* Labour Education. No. 25, May 1974 issue. ILO/Geneva.

** *See* the report of the ICA Regional Seminar on "Farm Guidance Activities of Agricultural Cooperatives", Seoul, Republic of Korea. September-October 1969.

methods of guidance depends on several factors, such as the objectives of the programme, quantity and quality of participants, contents to be conveyed and resources available including the trained teachers, suitable study material and audio-visual aids. As we already know the teacher is one of the most important factors in the effective use of methods, he should be given choice and facilities in his work. Nevertheless, important methods have been classified according to the size of audience and the level of participants' development. These are listed below under the Mass Teaching Methods, Group Teaching Methods and Individual Teaching Methods. Emphasis has been laid on the methods which are effective with small groups of adult participants and emphasise self-help.

Mass Educational Method

These are mainly for the purpose of getting awareness and interest of people in some new ideas. They include the following mass media of communication.

(a) Radio.

(b) Television (would be supported by satellite communication system).
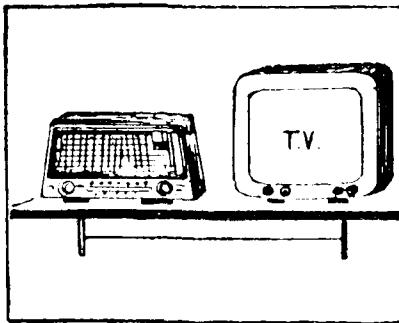
(c) Wire-communication system as in Japan.

(d) Visual-aids, such as posters, charts, film shows, slide-shows etc.

(e) Press & publicity material such as news stories, feature stories, newspaper columns, special news pages, bulletins, leaflets and circulars, reaching people by direct mail, through magazines, study material of various types and campaigns.
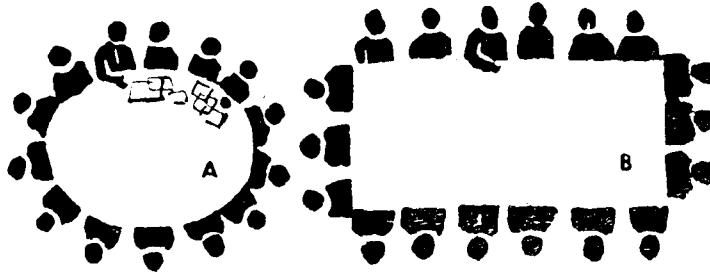
Group Educational Methods

Group methods assist people from awareness stage to the interest and sometimes to the trial stages of accepting new practices. They include the following methods. It is possible for the participants to ask questions, exchange ideas and stimulate each other to action, whenever a new idea is presented to them as a group.

Group Educational Methods (large groups)

(a) Methods Demonstration.

(b) Result Demonstration.

(c) Meetings of farmers, combined with method demonstration or result demonstrations, lectures, panel discussion, symposium, etc.

(d) Exhibitions, models, fairs and festivals.

(e) Study tours and field days.

(f) Seminars and Workshops.

(g) Training courses, functional literacy classes.

(h) Residential courses, e.g. folk high schools in Denmark, Vidyapeeths in India.

(i) Contests and achievement days.

(j) Dramas, group songs.

Group Educational Methods (small groups)

It has been found effective to serve in local cooperatives, through Advisory Groups.

Short courses.

Local leadership (model farmers)

Clinics, role-playing, creative dramatics and other group development techniques.

Study Groups, Study Circles, Group Discussions.

Commodity groups e.g. in Japan.

Tele-clubs and Radio Farm Forums as in India and other countries.

Voluntary and local leadership.
4-H and Young Farmers' Clubs.

Home Demonstrations.

Individual Educational Methods

Although much of extension teaching is done in groups, learning is an individual process. In many instances individual contacts with farmers are necessary to study the local situation and to get farmers to adopt a new practice. Individual methods include the following :

(a) Visit of guidance workers to farms and homes ;

(b) Assistance in preparation of individual production plans ;

(c) Supervised credit programmes ;

(d) Correspondence courses ;

(e) Farmers' calls to the offices of guidance agencies.

Local Leadership Method

This method is the use of leader-follower pattern existent in any community. Local leadership is utilised to reach a large number of farmers. The method involves locating, developing and utilising the local functional and voluntary leadership. The local study groups, study circles and discussion groups and audio-visual techniques, combined with problem-solving can help in developing local leadership and contribute to effective farm guidance work and member education programmes. Commodity groups in Japan which have been described later, have significantly contributed towards development of local leadership.

It is obvious that no single method or technique can reach all people nor it can influence all if it does. Farm guidance workers must be proficient in the use of various methods of education and guidance. To achieve desired objectives they should be able to select, adapt and use a suitable combination of methods and techniques. In general, [people are influenced to make changes on their farms, in their homes and in their community in proportion to the number of exposures they experience in extension education. However, some people may respond quickly and while others may react slowly. This is because their background is different, so they are in the different stages of adoption. This calls for a continuous and practical type of extension education using a variety of methods, suitable to meet the educational objectives and contents set for different groups. The resources locally available should also be kept in mind while selecting educational methods and techniques.

Commodity Groups within the Cooperative System

The commodity group method :

(1) is an answer to the perpetual conflict of single-purpose vs. multipurpose cooperatives—avoids the necessity of a farmer joining several societies ;

(2) encourages member involvement—interest maintained throughout the year—radio programmes can be tailored to suit the special interests of the various groups ;

(3) polarizes leadership and at the same time disperses leadership tasks among many ;

(4) facilitates the propagation of new ideas and adoption of new practices ;

(5) simplifies record keeping by the farmers themselves ;

(6) Leads to joint action at farm level, and also the development of specialized services which aid production e.g., controlled raising of chicks up to 120 days ;

(7) facilitates specialization by the cooperative farm guidance staff ;

(8) rationalizes the use of credit (supervised credit) and facilitates the recovery of loans. Concentrates capital in profitable lines of production rather than dispersing limited resources ;

(9) facilitates the work of National Marketing Boards and Cooperative Federations ;

(10) makes possible price stabilization over several years of the production cycle—(In Japan this is achieved through the monthly salary or long-term average payment system).

Commodity Groups in Japan

(1) Commodity groups were considered as informal units under the cooperative societies in Japan. In a group it was assumed that the pattern of farming of each member of a group is similar.

(2) The commodity groups are actual partners of the cooperatives to increase the production of specialized commodities in areas where cooperatives operate.

(3) Commodity groups provide avenues for training of local voluntary leaders for cooperative development.

(4) Commodity groups make possible systematic marketing, effective and practical financial projections and full utilization of facilities and equipment of the cooperative society.

(5) Assistance should be provided by the cooperative society to commodity groups to level up in terms of credit and supply commodities.

(6) Commodity groups should support the cooperative society and the cooperatives in turn cater to the needs of its members.

(7) Processing facilities and marketing equipment be provided and made available to commodity groups to enhance efficiency and effectiveness.

(8) Commodity groups should organize education and information activities for individual members in specialized project undertakings.

(9) Cooperatives should provide the essential and necessary guidance to raise the standards and quality of the farmers and its production capacity.

(10) Development programme evolved by the commodity groups should be submitted to cooperatives and sent to local government to invite its support.

Educational Material and Audio-Visual Aids

In the cooperative movement, the owners and users are the members who exercise ultimate control over both the policies and operations of their cooperative societies and movement as a whole. Accordingly, it is of the utmost importance that the greatest possible efforts should be made for the development of member education and it is obvious that much of the success of farm guidance programmes depends upon the study material produced and its proper use.
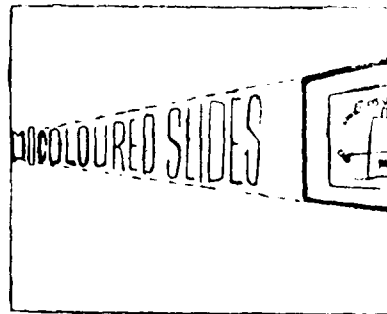
In preparing study material the following factors should be observed :

(1) it should be written in simple language, style and be adequately illustrated ;

(2) proper selection of contents preferably related to practical problems of farmer-members ;

(3) needs of the target groups, e.g. commodity groups ;

(4) percentage of literacy in the group ;

(5) funds available.

The most commonly used study materials are leaflets, pamphlets, posters,

booklets, instruction manuals and audio-visual aids such as films, film strips, flannelgraphs, slides, broadcasting, etc.

It has been proved that proper use of audio-visual aids brings better results in communicating ideas, and developing interest because of the following advantages ;

(1) It stimulates one's feeling and emotion.

(2) It helps much to eliminate monotonous fatigue.

(3) It easily attracts one's attention.

(4) It makes one's memory stay long and clear.

The National Agricultural Cooperative Federation (NACF) of the Republic of Korea has understood and recognized the importance of audio-visual education. It has been equipped with a camera-car, 10 mobile units, 2 movie cameras, 2 projectors, 163 slide-projectors, etc., and many kinds of audio-visual aids are produced and utilized for member education.

As the cooperative movement undertakes more complex and difficult businesses, the movement must recognize the growing needs of systematization and continuous improvement of cooperative education, particularly the production of varieties of audio-visual aids.

Evaluation of Farm Guidance Programme

In the field of education and farm guidance, evaluation is a systematic and objective assessment of activities and programmes as a whole in terms of objectives laid down in advance and against a set of criteria.

Educational evaluation can be compared with action or programme research and may lead to deeper research studies. However, it is more than psychological measurements, examinations, testing, record keeping for purpose of grading the trainees. Evaluative studies are also conducted from organisational, administrative and economic points of view.

The main purposes of evaluation may be described as follows :

(a) to keep the programme on right lines ;

(b) to bring improvements in a programme ;

(c) to collect evidences for convincing oneself and others about the utility of programme.

Some characteristics of an evaluation are :

(a) Evaluation can be both qualitative and quantitative.

(b) It can be internal or external or both. Educational evaluation are internally conducted for bringing improvement in teachers' performance, trainees achievements, and in the utility of training material and facilities. The results of evaluation are used to change syllabi and curricula.

(c) Sometimes though concurrent evaluation is conducted as a part of educational programme, it is generally conducted periodically and at the final stage of the programme.

(d) It tends to be comprehensive. However, different aspects of the programme can be assessed separately.

(e) It should be simple and economical.

It was considered necessary to determine the needs and objectives of the programme, and conduct a bench mark survey for the effective implementation and evaluation of a farm guidance programme. Other steps to be followed in evaluation are as follows :

(1) Defining the needs and objectives of the programmes.

(2) Setting up of a committee to develop the frame of reference and determination of scope, criteria, methods of evaluation etc.

(3) Collection of data (facts and figures) from direct and indirect sources in different stages of the programme implementation.

(4) Analysis and interpretation of data (to ensure that causes of deviation from objectives are detected).

(5) Reporting of results, suggesting ways and means of improving the programme.

(6) Application of results and recommendations.

(7) Further research and evaluation.

Conclusion

Of course, the above methods are not all. The educational technology has many more of them. As one goes deeper into the subject, one finds more and more methods of teaching, perhaps even better. An effort has been made here only to acquaint the cooperative educators community with the best of them and which could be employed by them easily without much bother. Additional methods of teaching could be created to meet the requirements of the type of audience that we get. We have to keep in mind the adult group always while thinking of new techniques and materials. Learning is a life-long process and it does not end up with matriculation or degree examinations. In-service training, orientation in new policies and programmes, national development etc. have to be constantly kept in view. By training the cooperative workers at the primary level or by providing in-service training to cooperative officials we have to achieve the best result i.e. efficiency and managerial skill. If they are honest, dedicated, well aware of their rights and duties, acquainted with the principles and practices of cooperative movement, they can contribute handsomely to the growth of democracy.

The application of new methods and techniques in cooperative education creates a greater awareness amongst people and infuses in them a sense of participation, cooperation and involvement.

V

Teaching Aids

Teaching aids are the most important vehicles of communication. They can be graphic aids, projected aids or non-projected aids. The teacher can select the most appropriate teaching aids for his audience.

An attempt has been made here to bring to the notice of the teacher the variety of teaching aids available to him and how to handle them. The teacher should know what type of aid will be most useful to him for a particular job, how it could be used and the sources of its availability. We have tried to be practical as to the use of various aids and an attempt has been made to inform the teacher how these aids could be assembled or produced locally. Obviously the teaching aids are not labour-saving devices. They intend to reinforce the knowledge and leave a lasting impression on the audience.

So far as classroom teaching is concerned, the following aids are regarded as effective and useful :

1. Film-strips and slides
2. Films
3. Overhead Projector
4. Opaque Projector
5. Recording
6. Chalk-board

7. Flannel Board

8. Bulletin Board

9. Plastigraph

10. Magnet Board

11. Tag Board

12. Posters and Charts

13. Flash Cards

14. Puppets

15. Printed Material

16. Photographs

1. FILM-STRIPS AND SLIDES

One single photograph, taken on a transparent film, duly mounted, is called a slide. A number of photographs taken on a transparent film and retained on the strip is called a film-strip. Film-strips contain between 20 to 40 frames with or without captions. The photographs are taken according to a well-prepared theme and the photographs are in a sequence. The captions help the students or the audience to know about the particular photograph or that serves as a part of the commentary. The film-strip can be given a pre-recorded commentary, or the teacher can go on commenting on each frame as it appears on the screen.

Special advantages with the slides and film-strips are that they could be interpreted both positively or negatively. Any particular frame could be retained on the screen for a desired length of time.

Single-frame
4 sprockets

24mm

18mm
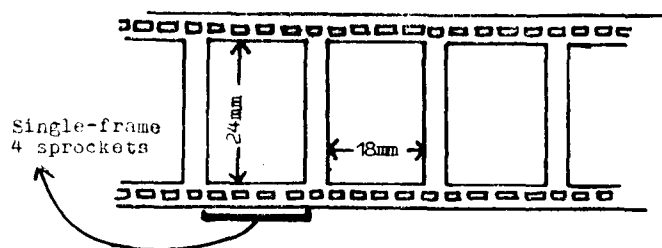
This is considered to be the most effective media of education for a group of 20 to 30 people. The teacher can select the relevant film-strip and correlate the

same with the subject. The Reserve Bank of India has, for instance, produced a number of such film-strips and the teachers can always make a selection.

Since there is an organised group in the class, the screening of slides or film-strips can be arranged without much difficulty. A screen can be permanently kept in the class-room, slides or film-strips projector can be easily brought in and the screening can commence as and when desired. Shown below are the components of a slides projector.
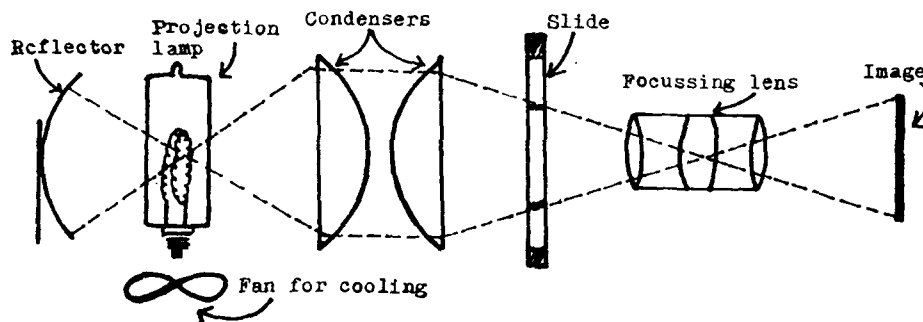
Of course, its maintenance may be a problem. Another problem is the non-availability of relevant film-strips. However, Cooperative Training Centres in collaboration with the State Cooperative Unions and the National Cooperative Union can always work out programmes to produce relevant film-strips and slides.

SLIDES

Slides in comparison to film-strips and motion pictures are the most simple
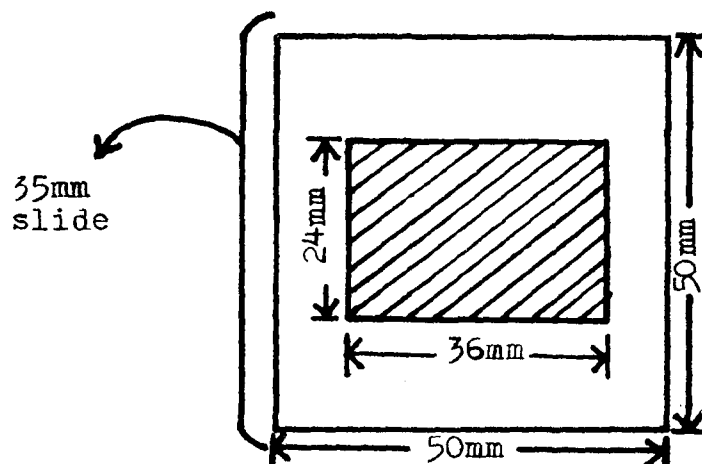
and inexpensive to make and use. They can be exhibited to the audience for prolonged periods until the viewers completely appreciated their importance. Each contains only a single idea and therefore is more readily understood. It is easy to review any picture which has been shown previously. They can be exhibited with ease and even in odd places e g. where there is no electricity e.g. by using magic lanterns etc. They are effective for recording projects for future reference.

FILM STRIPS

The film-strip is a continuous series of 35 mm. individual pictures called 'frames' arranged in a sequence and usually captioned with brief explanatory titles. For reasons of economy, the explanatory captions may be omitted from
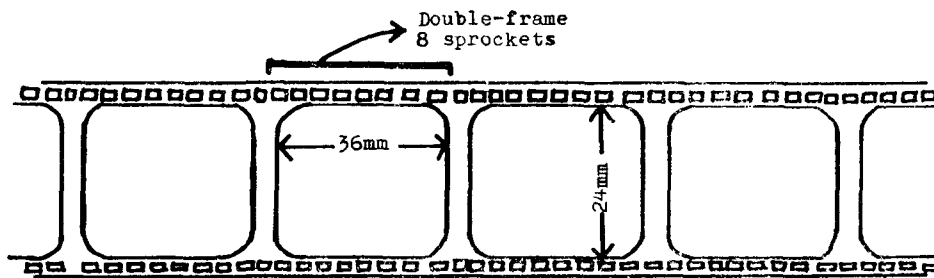
the film-strip and the explanations included in a manual or guide which can accompany the strip. The advantages of film-strips are :

(a) Less expensive than 16 mm. films to produce in quantity ;

(b) compact, light of weight, easy to file and store ;

(c) Simple to project on inexpensive equipment ;

(d) Can be accompanied by inexpensive explanatory notes in any language ;

(e) Flexible in use, rate of presentation can be geared to the understanding of the audience.

The techniques in using film-strips are approximately the same as those for the use of slides or even motion pictures. The use of strips, text books and motion pictures can be effectively correlated. Motion pictures can present a subject dramatically and intelligibly, the film-strip can emphasise and elaborate on the salient points in the film and the manual or text book can suggest to the instructor more effective ways to use both the film and film-strips, as well as provide other information helpful in doing the best teaching job.

Using Film-strips to Teach Reading

Here are some advantages of film-strips in teaching :

1. In teaching children how to attack problems in reading, group instruction is helpful. By projecting the page of a book on a screen, for instance, words and phrases are shown in sentence context. Further, all students can read them at the same time and discuss their relationships to the meaning of the sentence.

2. The teacher can direct students' attention to features of the reading material knowing that the students are actually focussing on the same things in their book.

3. When material is projected on the screen the teacher can emphasise on the highlights of the subject.

Value of Film-strips and Slides

1. Provide valuable illustrated material at a relatively low cost on a very wide range of subjects.

2. Particularly in the case of slides it is easy for the teacher to select the material he requires for his own lessons.

3. 'Feed back' from the class is easy to obtain as the lesson or talk progresses.

4. Much material of special relevance to local or specialised needs can be produced in slide form by the teacher if he has a camera.

2. FILMS

This is the most effective media for a large number of people. Receptivity of the message is the highest if the film is upto the level of understanding of the audience. So far as the use of films in class room teaching is concerned, it is generally felt that they should be used only to supplement what the teacher has told his audience. A separate time for the film should be arranged.
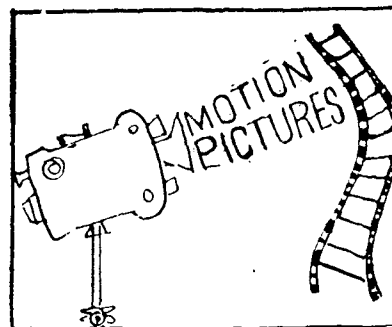
Motion pictures are produced in four sizes i.e., 70 mm, 35 mm, 16 mm and 8 mm, both in black & white and colour. 16 mm and 8 mm films are the most suitable for educational purposes.

Types of Films

A broad categorisation of films, which involves a certain degree of overlapping is : (1) informational, (2) skill or drill, (3) appreciation, (4) documentary, (5) recreating, (6) dramatic or episodic, (7) custom, (8) news, (9) scientific, (10) industrial, and (11) provocative. Directly arising from the above, films can be put to a variety of uses.

Information films inform, instruct or provide knowledge about people, a process, material events, geography, social conditions, past events, occupations and theories. They are true teaching films because they provide understanding and act as a teacher. The adjective "documentary" means the furnishing of proof through original or official papers whose historical authentication is unquestioned. The documentary film intends to carry a lesson, perhaps even a warning of admonition. The actors of the documentary films are real people in real life situations.

The Value of the Films

The film has the following advantages :

1. For subjects and processes where it is important to show movement.

2. Moving pictures attract and hold the attention of the viewer.

3. Many good films not only reproduce reality but make "reality even more real".

4. Films can slow down or speed up actions and processes.

5. By a combination of camera and microscope, films can show enlargements of objects and activities invisible to the naked eye.

6. By means of animation abstract concepts can often be clarified.
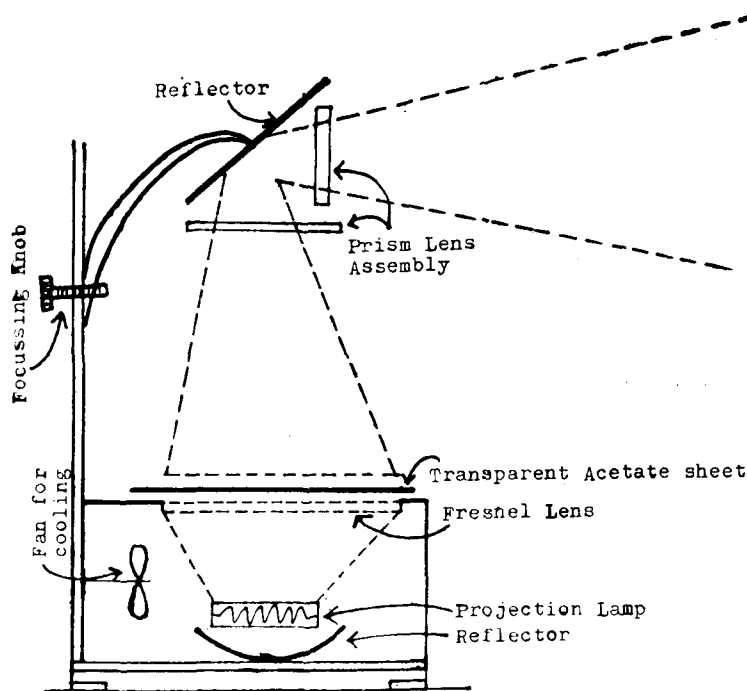
3. OVERHEAD PROJECTOR

This is the most ideal projector for class-room teaching. The teacher can

continue facing the class while operating this projector. The message is transmitted in front of the audience and the projector is also placed in front of the students. The message is inscribed on a transparent sheet which is projected on to the screen with the help of a prism lens.

The overhead projector is basically an instrument for projecting 10″ x 10″ transparencies and has been designed in such a way that it can be operated by the teacher in front of the class as the lesson proceeds in much the same way as the writing board, magnetic board, flannelgraph etc.

In addition to using transparencies there is a scroll attachment which can take a roll of transparent material 50 ft long by 10″ wide. This can be wound across the projector stage and used in much the same way as a writing board for notes, diagrams etc. Shown below are the components of an overhead projector.

The main advantages when using the overhead projector are :

(a) The image can be projected high on the screen or wall ; this enables all the class to see the projected image.

Chalkboard

Screen

Teacher's desk

$_o09$

Projector

Window

Window

Window

Door
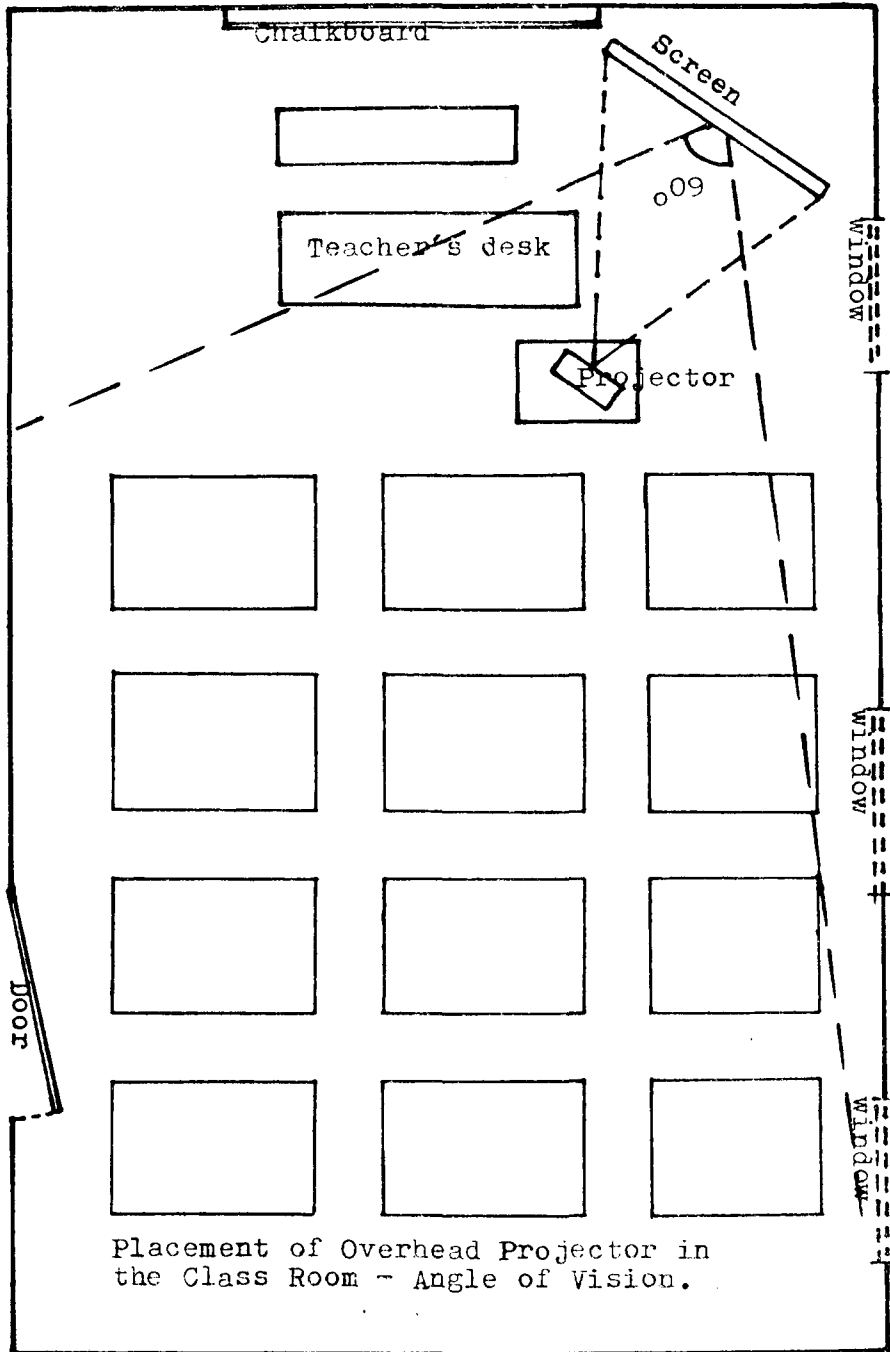
Placement of Overhead Projector in
the Class Room – Angle of Vision.

(b) It is unnecessary to black out the classroom.

(c) Drawings or illustrations can be pre-prepared on acetate sheet which can be used any number of times.

(d) Any subject can be broken down into separate overlays which can then be combined as the lecture progresses.

(e) It is easier for the teacher to write or draw on the horizontal surface of the projector than on the vertical surface of a chalk board.

(f) The teacher faces the class when presenting his material.

(g) Class attention can be focussed either on the teacher or the illustration by switching the projector on or off.

4. OPAQUE PROJECTOR

This too is a useful projector and the students find it very interesting. A small postage stamp can be enlarged 20 to 100 times with the help of this projector. This projector is useful for drawing maps and sketches from already printed material. The components of the projector are shown below :
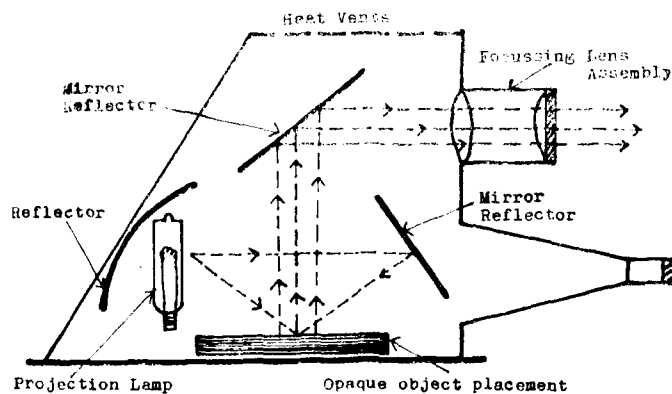
Everyone is a born artist. Art is inborn, spontaneous and eternal. The only thing is that in some cases the art is evoked and studied to its perfection while in others it sleeps. That is why on several occasions we get thrilled when a piece of art suddenly comes in front of our eyes. Our sleeping art gets a bit of inspiration

and it makes itself felt. Thus everyone is an admirer but there are only a few creators. This projector helps the students in copying artwork. Students find themselves involved in the activity in which this projector is used.

Type	Size	Nature of material	Sequence	Audio
Opaque Projector	up to 10″ x 10″	Any opaque material including page remaining in books and flat objects.	Unfixed	Teacher's voice
Slides	2″ x 2″ 3¼″ x 4″	Photographic or local made transparencies (glass, cellophane, and so forth).	Fixed or unfixed	Teacher's voice or recorded sound
Filmstrips	35 mm	Commercially made or other transparencies on film.	Fixed	Teacher's voice or recorded sound
Overhead Projector	10″ x 10″	Transparencies made of pictures, prints, charts, graphs, maps, and so on.	Unfixed	Teacher's voice or recorded sound.

5. RECORDING

A cooperative communicator has to be fully aware of the tape-recorder and its application in the process of teaching. Various recordings of important happenings could be played back by the communicator to support his points and to bring interest among his audience. This aid can also be applied to sustain the interest of the group.

The possibility of its use in education and training is being increasingly realised not only in our part of the world but in the affluent societies also to educate their children and adults. It can purely be audio-aid or it can be used

68

in conjunction with visual material such as pamphlets, charts, records, books, slides, filmstrips and puppets.

A new system called "Slide-Tape Synchronisation" is currently a craze with the educators in the West. Beautiful and meaningful programmes have been produced by various agencies there and which are being applied in schools and to educate their managers and students at various levels.

At the commercial level, several recorded speeches, dramas, discussions are available and educational institutions do purchase them for their own use. But in the cooperative sector, unfortunately, such an initiative has yet to take firm roots. We have therefore to content ourselves with recording our own programmes and playing them back for our audiences on appropriate occasions.

Operation

The tape-recorder is a mechanical device with a built-in motor and amplifier together with a recording head. The-tape-recorders are of two types : i) reel-to-reel recorder, and ii) compact cassette recorders.

REEL-TO-REEL TAPE-RECORDER

The spool of the tape is placed on the left of the recorder in the supply spool position. The tape is now threaded, shiny side outwards, round the first tape guide past the erase and record/playback heads, through the capstan and pressure roller then via the second tape guide on to the take-up spool.

REEL TO REEL TAPE-RECORDER
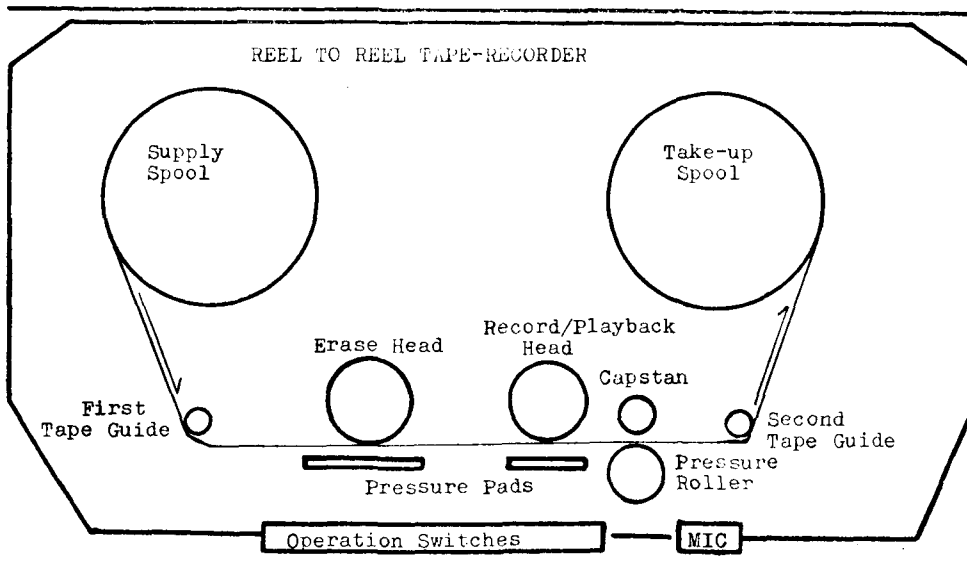
The first head the tape passes is the erase head. The function of this head is to erase any unwanted previously recorded material. This head is only operative when the recorder is switched to the record position.

The function of the Capstan and Pressure Roller is to draw the tape at a constant speed past the heads on recording and play back. The take-up spool merely exerts sufficient pull to take up the slack tape coming from the capstan and pressure roller. It is only on fast rewind in either direction that power is applied directly to the spools.

The Pressure Pads ensure that the tape has intimate contact with the heads.

Tracks

Full track : Information in the form of sounds is recorded on magnetic tape in a straight line along the length of the tape as it passes the recording head of the machine.

Half track : was developed for amateur and semi-professional machines. This necessitated the designing of the heads of the tape recorder so that they cover only half the width of the tape. Two rows of recorded sound can therefore be stored in a single length of tape, thereby allowing twice the recording time. Half track recording (which needs a machine made for the purpose) is done by using the tape from start to finish, then by turning the full take-up spool over and putting it back on the machine in the supply spool position.

Quarter track : No more than two tracks were used for a number of years, but now, due to technical advances in components and materials, quarter track recording is possible.

This means four rows of recorded sound on a single tape width, with tape heads even narrower. To record four separate tracks on the tape, both the turnover method described and a deck switch is used. This deck switch changes the height of the heads relative to the tape.

Running Times : (per track for tapes at $3\frac{3}{4}''$ i.p.s.)

Spool Size	Standard tape	Long play	Double play
3"	8 mins	12 mins	16 mins
4"	16 mins	24 mins	32 mins
5"	32 mins	45 mins	1 hour
7"	1 hour	$1\frac{1}{4}$ hours	2 hours

Slide-Tape Synchronisation

If you want to use your tape-recorder in conjunction with an automatic slide projector and slide-tape synchroniser for producing slide-tape synchronised programmes, only one track of the recording tape (usually track 1) can be used for commentary as the lower part of the tape must be reserved for the synchronising pulses which go to the slide projector causing it to change the picture at each pulse. A special instrument called the tape synchroniser is needed for this purpose.

Compact Cassette Tape Recorders

The principle of the compact cassette tape-recorder is basically the same as reel-to-reel except that the two reels (supply and take-up) are very small and enclosed in a case or cassette. This cassette is inserted into the tape-recorder which has been designed for it and so saves the user having to handle the tape and thread it on to the machine as in the case of the reel-to-reel recorders.
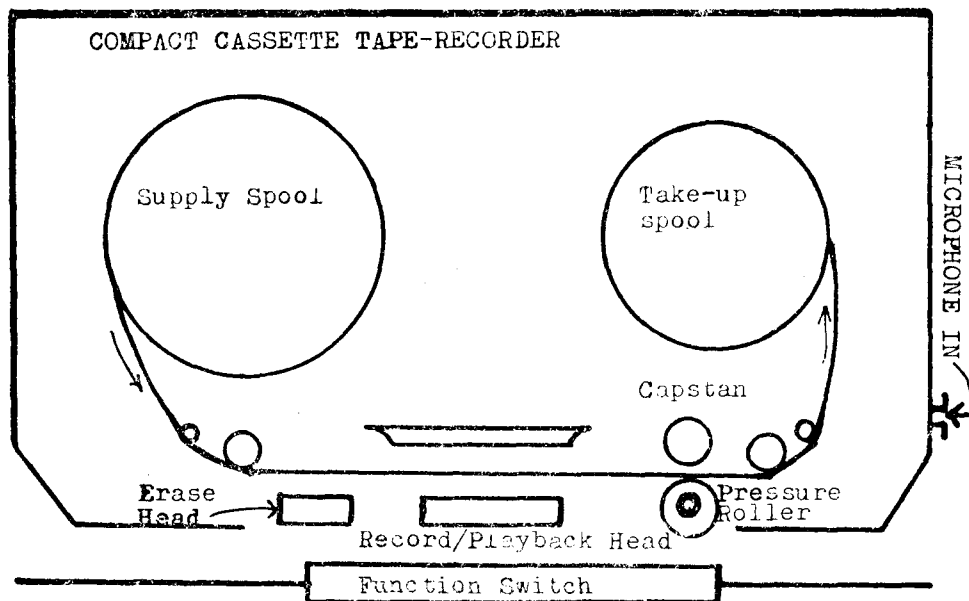
However, with the cassette system access to the tape is difficult and so cutting and splicing for editing purposes becomes impractical.

It will be seen from the diagram that, in common with reel-to-reel machines, the cassette system uses a capstan and pressure roller, pressure pads, erase and record/playback heads. The tape guides, along with the pressure pads, the supply spool and take-up spools, are situated inside the cassette, the spools being driven by spindles extending from the recorder into the centre of each spool when the cassette is in position. The capstan also protrudes from the recorder deck into a suitable clearance hole in the cassette. In this design the heads are situated outside the tape loop and so outside the cassette so that when the function switch is operated the two heads and the pressure roller come forward to make contact with the tape.

Tracks

In general, tracks on cassette machines are similar to reel-to-reel recorders. Instead of turning the spool over, one turns the cassette over to record on the second track of a half track machine.

Running Times : (per track for tapes at $1\frac{7}{8}$ i.p.s.)

Cassette code	Time per track
C 60	30 mins
C 90	45 mins
C 120	1 hour

Because of its compactness and light weight, the machine is very suitable for recording interviews and discussions in outdoor situations. The machine runs on dry battery cells and has in it a solid state inbuilt microphone. Cassettes keep the tapes safe from dust and other atmospheric hazards and can be stored in a comparatively smaller area.

Techniques in recording

1. Carefully and completely read the operating instructions supplied with your recorder as failure to do this may result in damage to the machine and lead to inferior recordings.

2. As previously stated, the erase head operates when the recorder is switched to the record position. Extreme care must be taken when operating the selector switch as switching to the record position instead of the play-back position may result in a valuable recording being erased.

3. The microphone supplied with most tape-recorders is generally the most suitable for that machine. The advantage gained by purchasing a more expensive one is often only marginal.

4. Learn how to use your microphone properly. Experiment with the 'microphone to subject' distance, making an *aural* note at the same time of the varying conditions, e.g. 'I am now recording with the microphone three feet away' etc.

5. Reverberation or echo effects in recordings can be considerably reduced by recording in a corner of a room.

6. Record at the correct level. Familiarize yourself with the gain or volume control. Too high a setting produces distortion. Too low a setting produces a weak signal on the tape which necessitates turning the gain control up on play back. This increases the background noise level.

7. The microphone does not possess the human ear's ability to focus or concentrate on a particular sound.

8. If you are forced to speak close to the microphone owing to noisy surroundings, speak across, not directly into the microphone. This will avoid distortion of the explosive sounds e.g. 'B' and 'P'.

9. If the recording is outdoors, wind noises produced by wind blowing across the microphone can often be reduced by placing a handkerchief over the microphone.

10. Handle the microphone as little as possible. Touching the microphone cable or microphone often produces loud noises on the recording.

11. Try to make recordings free from the stop and start clicks of the recorder control. This can be done by noting the gain or volume control setting required for a particular subject, turn the gain control to zero, start the machine, turn the control to the required setting and then commence recording. When the recording is finished turn the gain control back to zero.

6. CHALK-BOARD

It is one of the best and oldest friends of a teacher. With the advancement of technology, we may use other teaching aids but the black board will continue to dominate the class-room. It is an extremely important and effective aid.

It is the most dynamic aid. A teacher can move about while using the black-board. It is the cheapest aid since it provides a writing surface that can be easily erased and used over and over again.
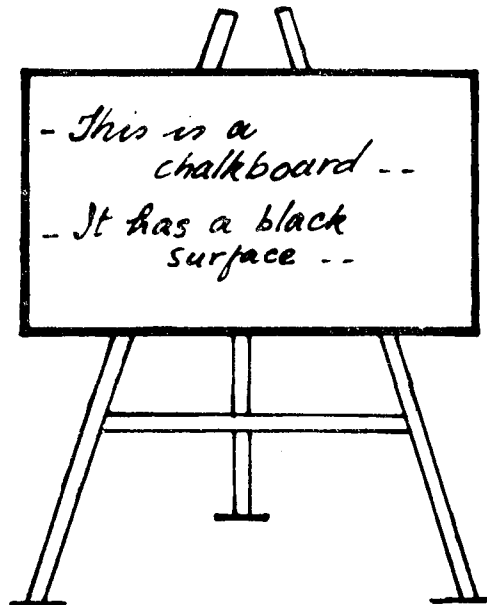
While using the chalk-board, certain precautions should be taken by the teacher. When you use black-board you have two chances of putting your story over to an audience—first, when you present it verbally, and secondly, when you outline its highlights on the black-board.

You have to keep the following in mind while using the black-board:

a. Do not overcrowd the board

b. Write only brief and short statements

c. Ensure that the board is easily seen by the students

d. Use colour chalks for emphasis

e. Erase all unrelated material

f. Do not eclipse the board.

A teacher can, however, change the colour of the board surface and that of the chalks for better impression and emphasis.

Position in the Classroom

Make sure that all your students can see that part of the writing board on which you are working. Try to avoid placing the board in part of the room that will cause it to flare or reflect light. From time to time walk around the classroom and view your work as the students see it. Remember that your layout technique is an example to your students. Give them a good one. The writing board has many advantages, a few of which are :

(i) It is always available.

(ii) It can be used for any subject.

(iii) Any alterations or amendments can easily be made.

(iv) No special equipment or talent is required to make it effective.

(v) It is relatively cheap to instal and maintain.

Types of writing board

Writing boards are available in various shapes, sizes and types of material.

1. Some are of wood painted with a matte finished paint.

2. Others have a plastic surface mounted on rollers and are available with painted outlines for different subjects e.g. geography, biology etc.

3. Smoothed cement painted matte black.

4. "White Boards" for use with felt pen or wax crayon. This type is especially useful for diagrams and maps.

5. Combined chalk and magnetic boards. These boards have a metal base and have the advantage of giving the subject flexibility. This is particularly useful in the field of sport, strategy, work study, lesson summary etc.

6. Chalk-boards can be made from black clay mixed with cement and charcoal. However these need frequent resurfacing and are inclined to be heavy on chalk due to the rough texture of the surface.

7. Sheets of cheap newsprint paper against a hardboard backing are useful for the touring lecturer.

Writing Materials

1. Chalk, white or coloured.

2. Chalk-dustless—This greatly reduces the dust on hands, clothes and in the air.

3. Thick chisel shaped chalk for lettering, art work etc.

4. Felt pens for the white board. The pens must be *water based* otherwise the board will be permanently marked. Erasing is done by simply using a damp cloth. Spirit based masters need to be erased with turpentine or benzene.

5. Wax crayons. These if used with some white boards can be very effective. Erasing is done by rubbing with a dry cloth.

Techniques

The writing board is usually the focus of attention in the classroom. Therefore :

(i) do not clutter up the writing board with unwanted or out-of-date material. Unwanted material should be erased;

(ii) you set an example by the way you lay out the lesson material on your writing board. Do not use it as a scribbling pad. You may very well find your students treat their exercise books in the same way;

(iii) see that your writing board is in good light and clearly visible to all your students;

(iv) from time to time study your writing board technique from your students point of view. Look at layout, size of writing, style etc.

(v) writing and figures must be easily seen by all students. A rough guide is 2¼ inches if to be seen from 30 feet;

(vi) illustrations should be as large and as bold as possible allowing an area around to set them off;

(vii) remember that it is practice that makes perfect both for the trained teacher as well as the student;

(viii) break the chalk or shape it with a knife to use exposed surface and hold firmly between index finger and thumb near the point;

(ix) fairly quick confident strokes are far more successful than a timid hesistant approach;

(x) a simple outline will often be much more effective than an over-complex drawing;

(xi) if colour is to be used do not use it indiscriminately. It can be far more distracting than effective and defeat its intended objective. Therefore use coloured chalks with care so that they command attention, not cause confusion;

(xii) chalk can be prepared by the teacher for special talks, e.g. a chisel point for fine up strokes and thin down strokes for diagrams, a fine point for line drawing;

(xiii) a most effective way when describing something to the students is for the teacher to build up the diagram as the lesson proceeds. This method takes practice but has a greater impact on the students;

(xiv) if a complex drawing is an essential part of the lesson then valuable teaching time should not be taken up by its execution during the lesson but it should be prepared out of class-time;

(xv) if you are to be followed in the class-room by another member of staff leave the writing board clean and ready for use.

Some important tips on the use of Chalkboard

1. Ensure proper physical placement of the board in a classroom. The lower edge of the board should be in line with the eye level of the viewers. It is generally 3 to 3.1/4 feet above the ground.

2. Keep the chalkboard materials handy. Chalk sticks of different colours, a duster and a wet cloth are the basic essentials.

3. Keep the board properly clean. When you use a dry eraser, clean the board from top to bottom. While wiping it with a wet cloth, use circular motions, so that all grooves and rough spots are cleaned.

4. Keep the board well-painted at regular intervals. Dark green board paint is the best for this purpose.

5. Do not display related materials on the chalkboard with tags or nails.

6. While writing never stand in front of the board and avoid talking while you are drawing on the board.

7. FLANNEL BOARDS

Flannelgraphs help the teacher to present vivid and meaningful association pictures to the audience. In fact this aid involves the following: a board covered with a flannel cloth or khadi, a number of cut-outs with sand-paper backing and a sequence of appearance of these cut-outs woven around a theme on the board supported by a well-planned commentary by the teacher.
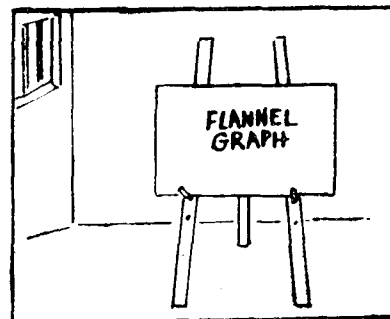
This aid has a number of names e.g., visual board, flick board, slap board, felt board, videograph. Plastigraph is a type of flannelgraph where the surface of the board is covered by a fine sheet of plastic and the cut-outs are also made of plastic.

The Principle of Flannelgraph

With the application of slight pressure any two rough surfaced materials will cling together without the aid of any other adhesive.

Flannelgraph can be an efficient, inexpensive and versatile visual aid. It is most useful in the fact that :

1. Any topic can be adapted to suit the needs of *any level of ability* or age group;

2. *Step by step presentation* of the main points of a lesson or lecture can be given;

3. *Group participation* can be encouraged thus stimulating both thought and action;

4. *Items* can be used singly or in groups, and if desired, gradually built up to *form a diagram or scene*;

5. A good way for *introducing new information* or *revising* certain facts;

6. It can often be used in *conjunction with audio-aids* such as the tape recorder or radio.

As a teaching aid it has the following advantages;

1. It is inexpensive,
2. It is easy to make,
3. It is simple and easy to present,
4. It can be conveniently transported,
5. It captures and holds the attention of the audience,
6. It is flexible to meet the teacher's requirements.

Its main disadvantage is that it is difficult to use in a windy and outdoors situation.

Types of Material Used

Background Cloth : This can consist of any of the following materials : flannel, flannelette, winceyette, flock paper, khadi cloth, towelling, milk filter cloth, old blanket. Cost will vary from country to country.

Size : A suitable size for classroom purposes is 24" x 26" or with audiences of 150 or more 30" x 40".

It must be tightly and firmly fixed against a hard surface. For temporary use, clips or tapes can be used to hold the material. Permanent flannelboards have their advantages but are not so easy to transport. All boards should preferably be used with a slight backward tilt at the top.

Colour : Dark green, blue or black is ideal for placing symbols or letters against. A white background is better for drawing maps, outlines, scenes or diagrams. Bold outlines can be done in crayon or felt tipped pen, white chalk, paint, or non-smudge crayons are good for colouring surfaces.

8. BULLETIN BOARD

Since there are few village newspapers, a well-planned bulletin board kept up-to-date can be of great help. It can be used for :

(a) Local announcements of importance to the whole village.

(b) Photograph to show local activity.

(c) Follow-up instructions for the village on things demonstrated and emphasized.

(d) Village reminders for things to be done—when, how and by whom.

These boards are used for displays, visual material, bulletins, important and relevant news-items, announcements which are of interest to the students.

The main objective of the bulletin board is to provide basic means of general communication. They are the best and cheapest means of communication. They should be sufficiently large in size, and prominently displayed. These can be made of jute, cloth, khadi, soft wood, plywood or even old newspapers.
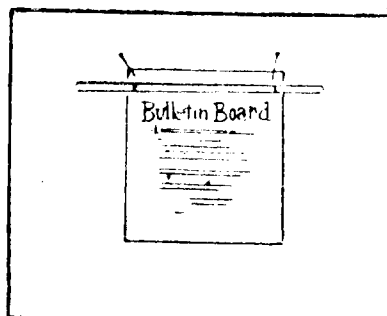
9. PLASTIGRAPH

Plastigraphs use the same principle as flannelgraphs, except that in this case certain smooth surfaces are attracted to one another without the aid of glues.

Brightly coloured or clear sheets of PVC plastic, which can easily be cut into required shapes, are applied to a smooth surface like plastic, perspex or glass.

Plastigraph is very useful where a 'building' stripping down process is involved and translucent or transparent overlays can be applied in several layers. However, it is a more expensive aid than flannelgraph and is allergic to dust and humidity.

10. MAGNET BOARD

Magnet boards can be made from sheets of galvanized iron or tin plate into which shapes or figures, backed with small magnets or magnetic strip, will adhere. Other surface may also be useful e.g. the back of a metal cabinet, the side of a motor vehicle, oil cans. If painted matte black or matte green, a sheet of galvanized iron will double as a chalkboard.

Wherever magnets are used, especially with a metal or metalbacked chalkboard, time and trouble will be saved on complicated diagrams of moving parts or processes, since magnetically backed aids can be re-arranged as necessary.

11. TAG BOARD

The tag board is made from hard board or masonite with small holes punched all over at regular intervals of an inch. The pictures are held on to the board with specially designed clips and pins. The tag boards are particularly suitable for mounted pictorial materials as they allow them to be displayed without perforation of corners. The thickness of the mount also allows it to be gripped firmly by the tags. Actual objects and specimens can also be displayed on tag boards by the use of special holders.

Conclusion

Putting up a display board should be a group activity. It should result in 'group feeling, group planning, group sharing, and group evaluation'. This means that the teacher has to take the students into confidence and enlist their cooperation at all stages of arranging a display. The students themselves have to suggest the content, collect and select materials, mount the pictures, write captions and then arrange their display. The teacher has only to guide.

Display boards are good, but for a particular purpose other aids may be

better and then, there is the teacher who has to play the essential human role, for teaching is purely and fundamentally a human relation.

12. POSTERS AND CHARTS

They are useful in the process of teaching. They are the visual representation of facts, situations or objects for making comparisons, for summarising or for showing developments. It is the most effective media of communication for class-room instruction. They can also be used effectively in mass campaigns and in programmes like the health education, propaganda campaigns, member education programme, family planning work etc.
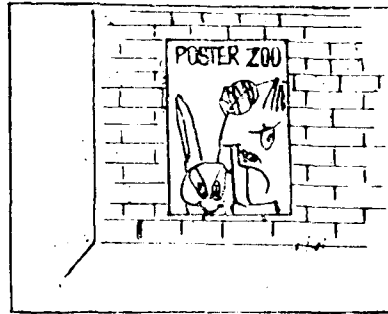
According to Edgar Dale, a chart is "a visual symbol summarising or comparing or contrasting or performing other helpful services in explaining subject-matter." Charts and graphs are very much used in depicting progress or achievements in certain sectors.

They are of the following types :

Tree charts ;
Stream charts ;
Flow charts ;
Table charts ;
Strip charts ;
Time charts ;
Flip charts etc.

Graphs are of the following types :

Bar graphs;
Circle graphs;
Line graphs;
Pictorial graphs.

In the preparation of charts and graphs care must be taken that the reserved area is sufficient for the message and that it is not too crowded with figures and colours.

< 250 mm

250 - 1000

1000 - 2000

>2000
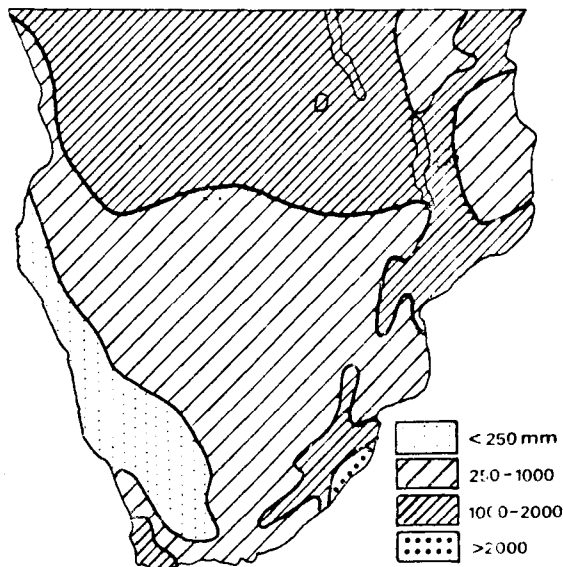
A teacher can explain his various points with the help of charts and graphs. While teaching the progress of cooperative banking, the teacher can use the charts and graphs and draw simple sketches on the black board itself. He can involve the students in preparing such aids for display in the campus of the training centre.

I am a factory - a cooperative factory.
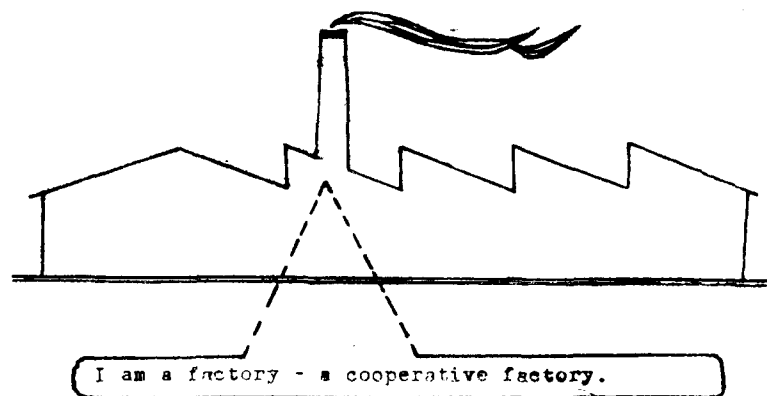
POSTERS

With the help of a poster, a message can be taken to a large section of the population at a reasonable cost. It is an excellent medium for teaching or educating people in general. So far as class-room teaching is concerned, it plays a less prominent role since it appeals to a larger section of the people while the number of people in a class are limited. However, posters produced by a central training organisation could be usefully employed in class-room teaching. In that case theme of the poster should be correlated to the subject taught to the students at the various training centres.

Their Types and Uses

Posters and charts can be extremely valuable visual aids in teaching training and learning, provided careful selection and consideration has previously been given to their making and use.

Posters and charts have quite different functions to perform. Both, however, should have the qualities of *Simplicity*, *Brevity* and *Clarity*. The design and layout should be attractive and eye-catching. In the following pages a couple of examples of charts, posters and graphs have been given.

Posters should mainly be capable of standing alone. They are used for :

1. arousing interest in a new idea or campaign ;

2. encouraging a new practice of behaviour ;

3. reminding people of certain topics or facts ;

4. giving sufficient impact so as to appeal to the emotions and intellect, of the onlooker (limiting 7 words to a poster means that at a glance "He who runs may read") ;

5. being part of an exhibition or wall display and then used in conjuction with other media.

Charts however, are mainly used by the teacher or lecturer to :

1. give instructions and explain processes and techniques ;

2. enlarge items which are very small ;

3. reduce in size objects which are too large ;
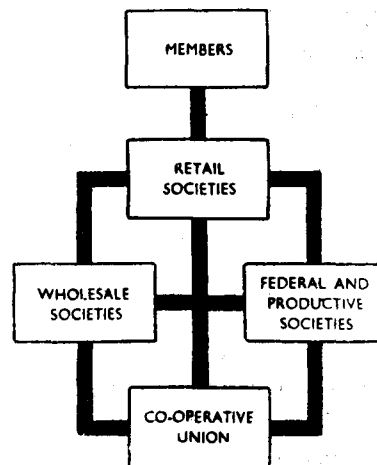
4. simplify in diagrammatic form equipment, machinery and processes which would otherwise be too difficult and complicated to comprehend easily;

5. stimulate learning and encourage further research and practice.

The poster is an important visual aid. It must always be used as a part of campaign or a teaching programme. It will serve first to inspire people and serve as a reminder to the villagers as long as it remains in a village. To be useful a poster must be planned for a special job. The following points should be considered in making a poster :

(i) To do a special job—promote one point and support local demonstrations and exhibits.

(ii) To be planned for the people—it should contain dramatic pictures that will make people look and tell a story at a single glance.

Posters should have bold letters, one idea, pleasing colours, big enough (20″ x 30″) and few and simple words. Posters should be placed where people pass or placed where people gather when giving a demonstration or a film show.
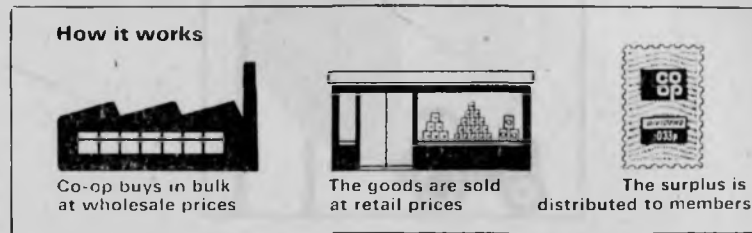
A poster should have the following qualities :

1. it must attract attention;

2. convey message quickly;

3. lead eventually to action.

It is very important that very few letters are used. Two or three bright colours will add to the value and beauty of the poster. It is suitable for group teaching. By fixing certain objects on to the poster, a 3-Dimensional effect can be achieved.

Charts can be classified into the following groups :

1. Pictorial Charts consisting of :

How it works

Co-op buys in bulk at wholesale prices

The goods are sold at retail prices

The surplus is distributed to members

(a) good sized photographs or illustrations with clear and precise information.
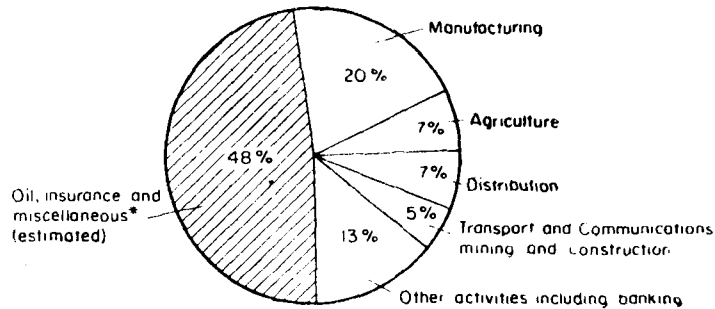
PRODUCTION OF
TRACTORS

1952
18419

1949
7180
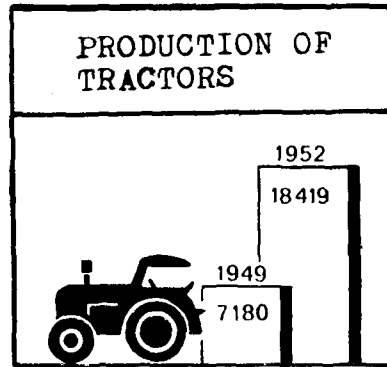
(b) maps containing sufficient information so as to be interesting and informative but not overwhelming. Labelling to be clear and distinct and if used as a class teaching aid then visible to all.

2. Pie Charts—one way of presenting statistical information of simple proportions and quantities.

PIEGRAM 70. UK Direct Investment by Industry

Percentages of net flows to developing countries
(Including reinvested earnings) 1958-61

Manufacturing

20 %

7% Agriculture

48 %

7% Distribution

Oil, insurance and
miscellaneous*
(estimated)

5%

13 %

Transport and Communications
mining and construction

Other activities including banking

Total: £606 m. (estimated)

*Miscellaneous is negligible.
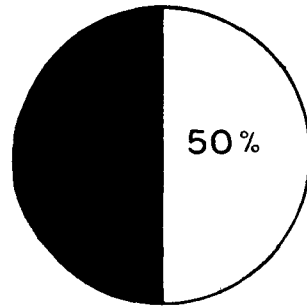
3. *Bar or Graph Charts*—an excellent way of communicating statistical data which can easily be translated.

NATIONAL DEBATING COMPETITION

POSTERS/CHARTS/GRAPHICS - Layout Schemes 1
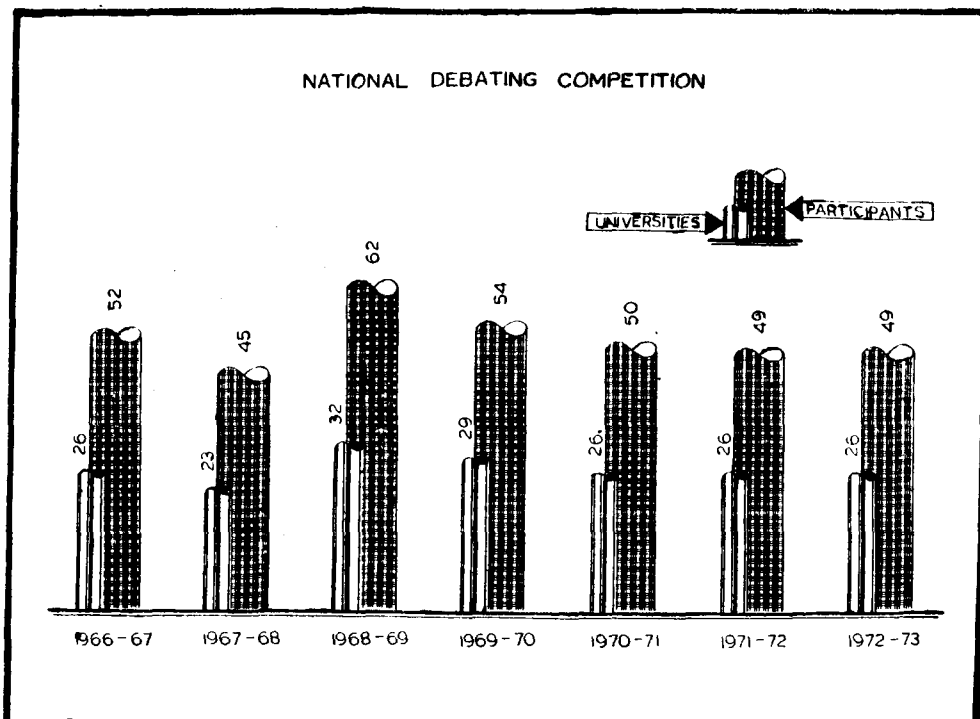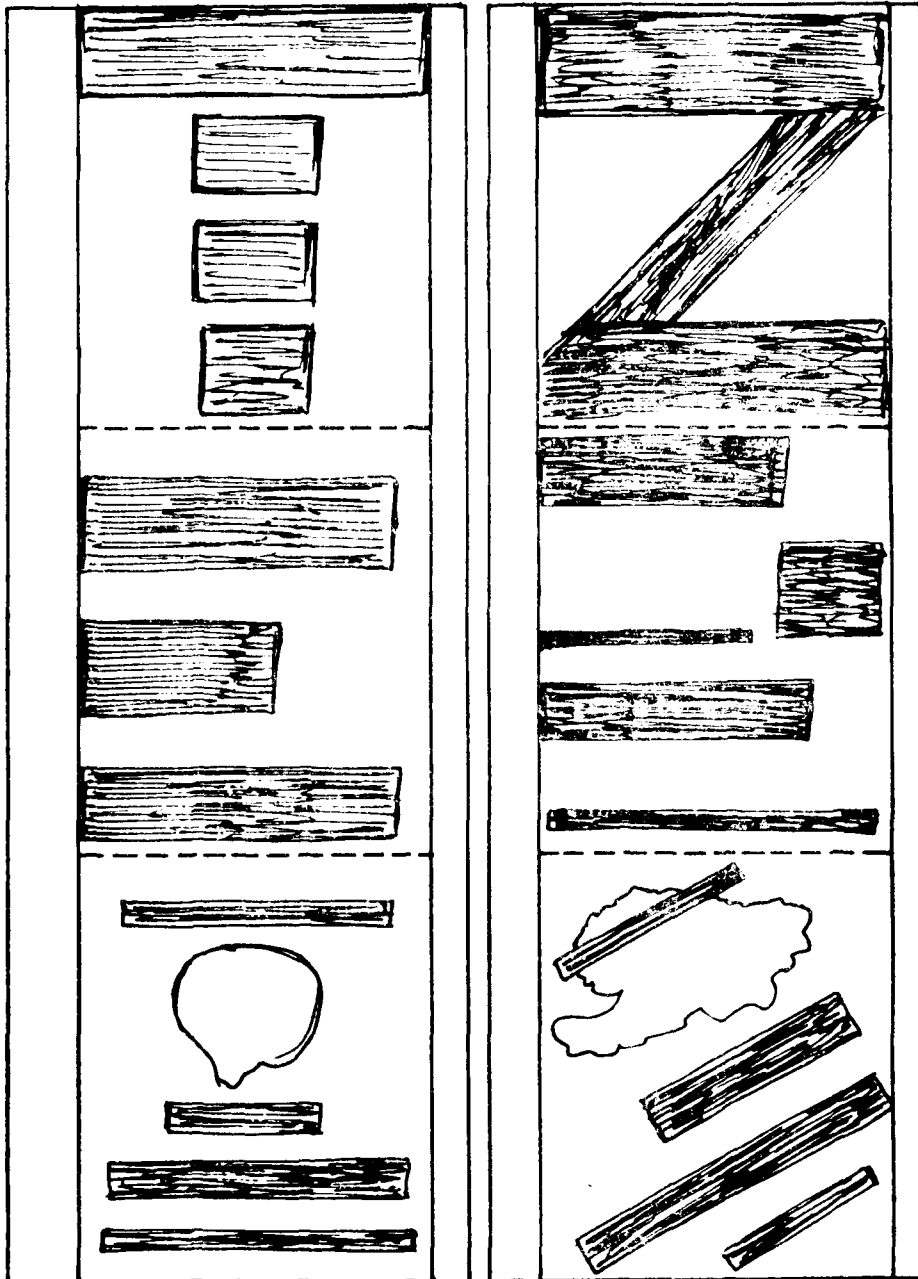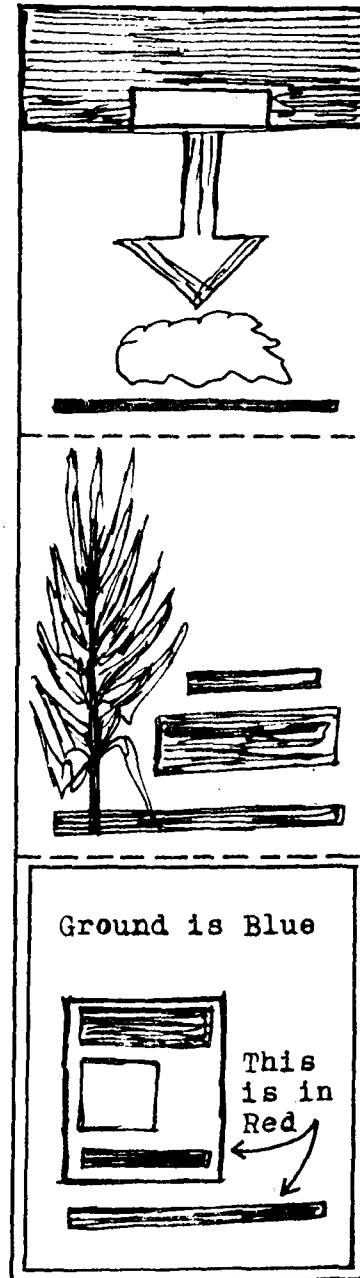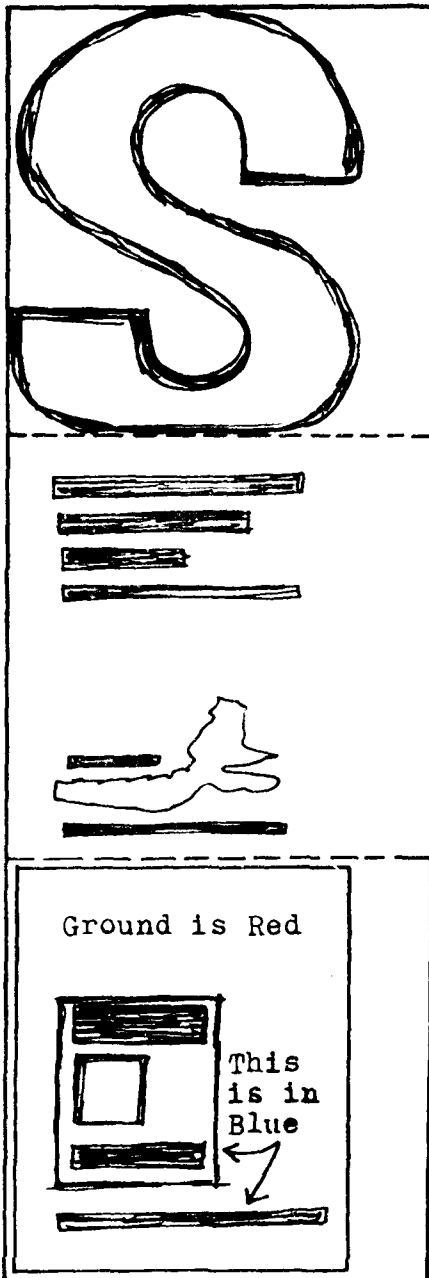
POSTERS/CHARTS/GRAPHICS - Layout Schemes 2

Ground is Red

This is in Blue

Ground is Blue

This is in Red

4. *Flow Charts*—mainly self-explanatory. Symbols and arrows are frequently used in this case.

5. *Flip Charts*—Extremely useful for presenting one idea at a time in a particular theme whether it be for health, history, agriculture, cooperatives or language.

6. *Animated Charts*—require a little more ingenuity and skill to make slotted strips allow charts to be animated one way or another. It is useful for TV illustrations. Cardboard wheels is another method but simplest of all is the one with little windows which open to reveal hidden information.

7. *Wall Charts* especially commercial ones contain so much information that pictures, diagrams and words are too small to be seen at a distance. Useful for placing on the wall for individual or group study.

8. Teaching Charts play an integral part in a lesson or lecture. All visuals, symbols and lettering should be easily visible to everyone. The value of a good teaching chart cannot be over-estimated.

    Posters and Charts can be Commercial or Home-Made. Often sections of a commercial chart can be cut up or enlarged by means of a pantograph or episcope and made into a simpler chart.

Points to ask oneself and remember when designing a poster or chart

1. In which country will it be used ?

2. To what type of audience will it be shown ?
    (a) adult or children ?   (b) literate or illiterate ?

3. What quantity will be required ?

4. Is silk screening the best method to use ?

5. How many colours should be used and what type—chalk, crayon, paint, charcoal ?

6. What type and size of lettering will be best; upper case, lower case, free-hand or stencil ?

7. Which will be the best design and layout ?

8. Will there be opportunities for pre-testing some of the rough sketches ? Try to do some, if possible.

9. Is it to be used indoors or outside ?

10. What will be the most suitable material to work on : sugar paper, brown paper, newsprint, cover paper, poster paper or card ?

11. Will there be means of evaluating the effectiveness of chart or poster afterwards ?

12. What will be the best method of preserving it : varnishing, edge-binding, etc ?

Colours

For those who would like to make a poster, the following information about colours would be of great help. There should be a proper combination of primary and secondary colours, warm and cool colours, achievement of constrasting colours etc.

1. *Basic primary colours*—yellow, red and blue.

2. *Secondary colours*—orange, green and violet by blending primary and secondary colours we produce the intermediate colours.

3. *Warm colours*—convey a sense of nearness and lively exciting effect such as reds, orange and yellows.

4. *Cool colours*—convey a feeling of freshness—impression of distance, blues, greens, violets.

5. *Light colours*—give the feeling of space and volume.

6. *Dark colours*—create illusion of smallness—dark background bring out light coloured objects and shapes and lines sharply.

Colours which catch the eye most forcefully are orange, red and blue.

By using complementary colours, that is, colours opposite to each other you can obtain a contrasting effect. These are :

yellow	—	violet
red	—	green
blue	—	orange

Aids to Lettering

Most charts, posters, transparencies and displays will require some lettering and the finished effect will *not* be *better* than the lettering whatever the illustration might be. For this reason the captions used should be planned and executed with just as much care as the drawing itself.

Important considerations

1. *Legibility* : The size of the letters should be in keeping with the amount of detail of the drawing. Plain letters without serifs are often easier to read at a distance than ornate ones.

2. *Attractiveness* : Use a well-designed and attractive alphabet in keeping with the message to be conveyed.

3. *Spacing and layout* : Always use *optical spacing*. Letters differ both in shape and size. If a ruler is used to measure equal space for each letter, the result will be that too much space is left between some letters and not enough between others. Keep in mind, therefore, the mechnical and optical distance between letters. Contrast and emphasis may be obtained through the sparing use of colour and by varying the size of letters. Make sure the lettering is an integral part of the whole design.

Types of lettering aids

1. *Rubber stamps* : These are available in a wide variety of sizes and styles. They are economical and easy to use, and give acceptable results if a guide or T-square is used.

2. *Cut-out letters* : Many are commercially available, cut from cardboard, wood, plastic, and felt and these may be used as templates for stencil cutting or for giving a 3-D effect to displays. Cut your own letters from newspapers, magazines or posters. Letters cut from expanded polystyrene are very effective for display work.

3. *Stencils* : Paper, plastic and metal stencils are available in a variety of styles. The *Econsign* stencils give very professional results and are quick and easy to use. Use a stencil brush, crayon, air-brush, spray-can or spatter.

4. *Pens and guides* : Speedball are the most common for hand lettering, but in some respects these have been replaced by felt-tip pens. Use a brush or poster pen for large bold work.

A wide variety of nibs is available for script-writing. Attractive lettering may be produced with pens improvised from shaped bamboo cane.

Most guides need a special nib for effective results; of these the uno, rapidograph and standardgraph are the best known.

5. *Prepared Lettering* : This gives the best results when work must be enlarged through projection e.g. transparency making, titling for slides or cine work. Ideal for reproduction of art work for block-making etc. and captions for display.

Letraset and Chart-Pak offer a wide veriety of type styles and sizes and also symbols for architectural and technical drawings.

Illustrations

Besides using mechanical devices to achieve an attractive and impressive lettering, it is important that the instructor makes use of his imagination. To fill the chart or poster he needs to have some pictures, illustrations, drawings etc. He can go through old magazines, pictorial journals, posters etc. and take out the pictures or illustrations which are very close to the theme already selected by him for the poster. These pictures can be pasted up in proper places and bordered with colour so that the cut ends are not prominently visible.
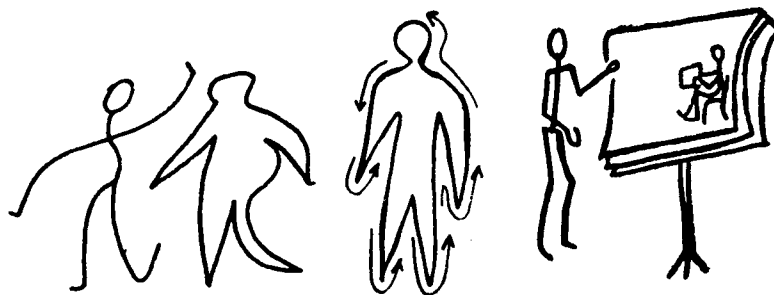
Also some free-hand illustrations can be employed. These are stick-figures, cartoons and outlines. Stick-figures are easy to make and with a little practice the instructor can train himself to make these stick figures work and speak for him.
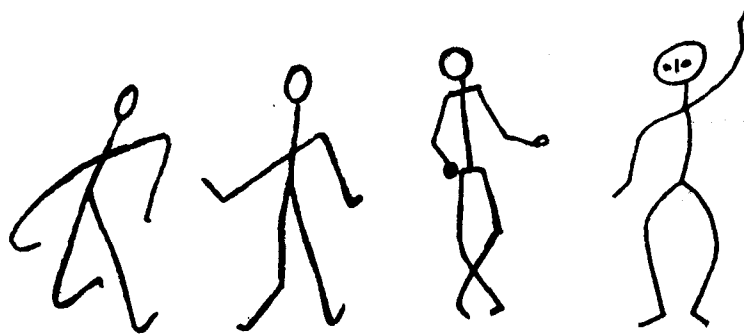
The best way to learn this art is to copy simple cartoons appearing in daily newspapers. Some extension agencies publish their stories in cartoons or in stick-figures. These could be copied by the instructor first on the same scale and then

attempt to enlarge these figures a little. Practice makes a man perfect, and thus will perfection be achieved by the instructors by having a continuous practice. A couple of figures are given here. These may be copied and when this is done, the Instructor could try to enlarge them and alter their expressions and positions.

STICK FIGURES AS TEACHING AIDS
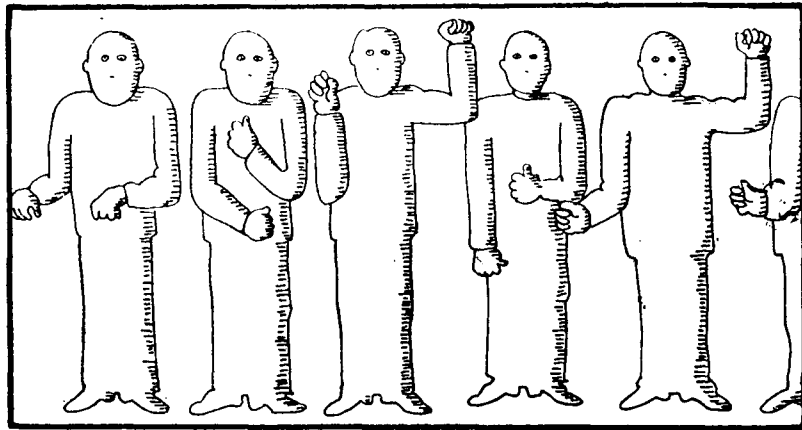
13. FLASH CARDS

With the help of 12"x14" thick cards the message is flashed to the audience. These are sufficiently thick cards on one surface of which the pictures and text are printed and on the other side a brief commentary is printed. The back side of the card remains towards the instructor while the front is facing the audience. A story is prepared around a carefully chosen theme which is later on visualised and broken down into 15 or 20 frames i.e. cards. The instructor speaks to the audience with the help of notes that are printed on the back of each card. The cards are presented to the audience in a serial order. The first card generally tells about the story and serves as an introduction. The last card generally summarises the story and highlights the outstanding features of the theme.
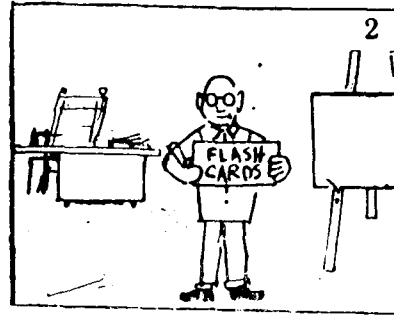
The cards can be kept on a table and the instructor can pick them up one by one, all the time holding the card in his hands. He can use the chalkboard to keep the card there if it needed a detailed discussion or description.

The visuals are strong and bold enough to be seen by a group of about 20 people.

If we take pictures of these cards in a serial order the result could be a film-strip. This is therefore a replacement to film-strip where the situation and resources do not permit the use of film-strips and film-strip projectors.

14. PUPPETS

Puppetry is especially suitable for villages. It is an inexpensive activity and is an easily acquired art. The puppet play can teach a lesson about health, literacy, agriculture or home-making.

Type of Puppets

These are classified according to the method of control.

1. *Glove or Hand Puppets* : Operated by the operator's hand inside the puppet.

2. *Rod Puppets* : Operated by a main supporting rod and one or more secondary rods, requiring two hands and sometimes two performers.

3. *Hand and Rod Puppets* : A mixture of 1 and 2 operated by one hand inside the puppet, controlling head movements, and one or two rods to the arms.

4. *Shadow Puppet* : Using a flat cut-out figure held behind and close to the screen. Lit from the rear so that the shadow is seen on the audience side of the screen. May be operated by rods or strings. May be three dimensional.

Types 1, 2 and 3 are operated from below; Type 4 is operated from above.

Use of Puppets in a classroom situation

It is important to have student participation from the start :

(a) In the conception of the subject.

(b) In the planning of sets and characters.

(c) In writing the script.

(d) In the production of the puppets.

(e) In the production of the sets.

(f) In the final play production.

Puppets in extension situations

If puppets are to be used to illustrate subject matter in the fields of agriculture, health or community development, the audience should be able to easily identify themselves with both the puppet characters and the setting. It is important that the situation projected is typical of local setting, custom and dress Preferably the script should be in the vernacular with pre-recorded local musical backing.

Much practice is needed to make the puppet come to life.

15. PRINTED MATERIAL

In class room situation, the role of printed material cannot be overemphasised. Without this aid, it would not be possible for the students to achieve a state

of comprehension. Any lecture delivered by the teacher should preferably be supplemented by his written notes with illustrations or photographs. For the cooperative training centres, it would be good if they produced a sort of mimeographed bound handbook containing synoptic notes with photographs, for the use of future trainees. The teacher then need only to highlight some of the points of his lecture. The background material is already provided in the papers.

The material should be nicely made, tastefully illustrated and printed and preferably in a bound form.

The training centres could issue a monthly or bi-monthly newsletter to all their former trainees. This newsletter could be either printed or mimeographed. The trainees who had attended the various training courses at the training centres could be invited to send on their experiences to the editor for publication in the newsletter. This *will serve as a feedback* which is so very important for improving communication process. The teacher would be able to evaluate himself and his former trainees. Also the training centre would be able to re-adjust its training programmes in view of the points made by the former trainees.

16. PHOTOGRAPHS

"A picture is worth a thousand words". Good photographs represent chapters of life. They are a permanent record. A teacher could use good photographs to illustrate his points. While discussing the development of consumer cooperative movement in Sweden and the progress which the consumer stores made there, the teacher could illustrate his examples by showing some photographs of consumer stores i.e., Konsum, Domus, their layout, self-service system, payment system, and organisation structure of the consumer cooperative movement. These photographs can be had from the Swedish Information Centres or directly from the Swedish Cooperative Union & Wholesale Society, SCC, or collected from the various Swedish cooperative journals like Vi. After looking at the photographs, the students will naturally like to compare them with the local conditions. This desire will lead to further informal study.

A Library of Pictorial Materials

Needless to say, it will be necessary to classify and make a library of your pictorial materials if they are to form a functional collection. A practical and simple solution would be to classify the materials that you have collected subject-wise and to place them in covers which should be arranged alphabetically.

Pictures that you value may be mounted and kept separately. Mounted pictures have an increased life-expectancy and are easy to store and locate. The un-mounted materials may be placed in file covers or envelopes or in box type files. The file covers could even be improvised, if necessary.

While taking out pictures from a magazine or a newspaper or from a booklet remember to note down all the necessary details about the picture on its reverse or on an accompanying sheet of paper, for otherwise it may not be possible later to recall what it was about. Sometimes, it may be possible to retain the original caption; at other times it may be necessary to write an annotation for it.

Once a particularly effective bulletin board display has been arranged, it may be helpful to file it separately in an envelope as 'a set' for possible future use. It would be helpful in such cases to mention on the cover the details regarding theme, topic, and the audience for which it was conceived and used.

Standards of Selection

Though pictorial materials are excellent teaching aids, they have to be subjected to a careful selection while making a classroom collection. For pictures can misrepresent or distort. The following standards of selection should be applied :

Relevance	...	Are they relevant to your needs ?
Size	...	Are they large enough to be read in detail and to be seen by all when put on the bulletin board ?
Simplicity	...	Do they present the subject in a straight-forward and simple manner ?
Production	...	Are they well produced ?
Style	...	Are they realistic in style ? Stylized art forms are generally unsuitable for a school collection.
Colour	...	Is the colour authentic and does its use make the picture more understandable ?

It would be helpful to check on the following points after setting up a display :

1. Are the selected pictures good and neatly mounted ?

2. Is the lettering well done, and are the captions catchy ?

3. Is the display harmonious, that is, do the lettering, colour and materials 'go together' ?

4. Is it balanced ? If there is a feeling that some pictures need to be shifted or that vacant spaces on the board need to be filled, it indicates a lack of balance.

5. Has the theme and the central idea of the display been properly emphasized by colour, word and arrangement ?

Camera Procedure

1. Decide *subject* and area to be photographed.
2. Assess the exposure. (Tables or Meter).
3. Decide aperture/shutter speed priority, then set both on camera.
4. Focus the camera lens on the plane required.
5. Ensure the shutter is set and film wound on ready to take the picture.
6. Aim camera and take picture.

We therefore find that a number of simple teaching aids can be used by the teacher in the class-room situation to bring about his points to the students. It entirely depends on the teacher whether to use the teaching aids or not. It is, however, felt that "A bad teacher with good aid is not a good teacher, A good teacher with minimum aid is a good teacher". Remember, the class room should not be converted into a display room of charts and posters, projectors etc. Minimum teaching aids which are really connected with the subject should be brought into the class and applied when it is found absolutely essential.

The application of teaching aids, whether projected or non-projected, would certainly help the teacher in putting his ideas across. They serve as a vehicle of message. They transmit your thoughts more effectively to the students. Their application should be judicious and selective.

Conclusion

A whole range of projected and non-projected aids have been discussed in this part of the book. It might appear to be a very technical portion of this handbook. So long as one is scared of using these aids, one might feel it to be

highly technical, but once you are willing to let your fingers smudge with colour and ink, you will pick up courage. You can then make your class to be lively and cooperative. You can communicate with your group effectively and speedily. By merely holding on to the chalk-board, lecturers/teachers can do wonders. Why not you! You must know all about these aids. It is not necessary that you use all of them. This is extremely important. Use only two or three of them in one session. Using more aids in a single session confuses you, in the first place, and deprives the students, to learn anything, in the second place. You have, therefore, to select your aid and teaching technique judiciously. Do not convert your class room into an exhibition, or a repairing workshop of projectors and other equipment. If you are clear in your thought, sure of your equipment, and the selection of your aid, you can communicate with your group better.

VI

Graphic Aids—Aesthetic Part

Under this heading we would like to briefly discuss a little bit of the aesthetic part of a picture or fundamentals of a good photograph. This section will help us in understanding a good graphic aid, or a good photograph and would lead us to make good photographs and even better painting.

There are two main *aspects* of a picture :

1. Expression—it differs from individual to individual. It exposes the personality. It is concerned mainly with personal taste.

2. Technical Efficiency—This means to what extent the picture can be branded as an excellent one, its technical efficiency, the yardstick to measure the technical qualities of a picture.

We can measure the technical efficiency according to the following yardstick :

Composition of the picture, its lay out, or the pictorial arrangement, its shape. This can further be detailed :

   (i)   Line

  (ii)   Mass

 (iii)   Form

104

(i) *Line*—There are various shapes of line itself. They are :

a. Straightlines :

They indicate directness, rigidity, firmness.　(a)
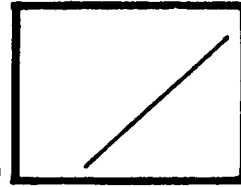
b. Curved Lines :

They give grace, beauty, faminity, softness, smoothness, tenderness.　(b)
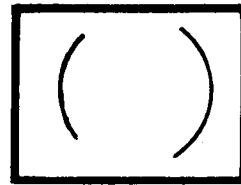
c. Horizontal Lines :

They indicate rest, repose, laziness, infirmity.　(c)
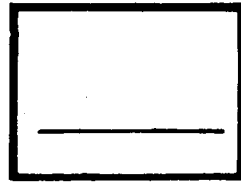
d. Vertical Lines :

They mean aspiration, determination, challenge, confidence, manhood, high thinking.　(d)
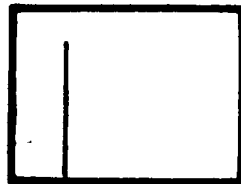
c. Broken lines :

They mean indicision, weakness, fickle-mindedness, trend breakers.　(e)
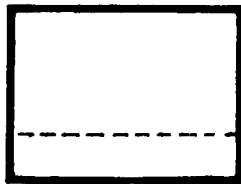
f. Diagonal lines :

They represent force, action, advancement, progress.　(f)
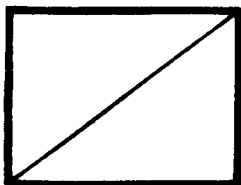
(ii) *Mass*—Solid weight, psychological weight which is very difficult to define. It is also quite a task to determine the mass and the weight. This is a sort of filling, giving a sense of occupation of space.

(iii) *From*—It is an aesthetic arrangement of areas that makes a picture. It has the following characteristics :

a. Square form :

This shows the equality of interests, sense of conformity.

(a)
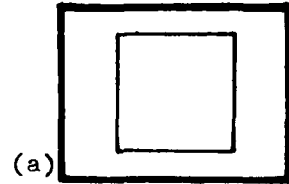
b. L shape

This means opposition of interests, *Guru* standing and the disciple touching the feet.

(b)

c. Triangle shape :

Means unity of interests.

(c)
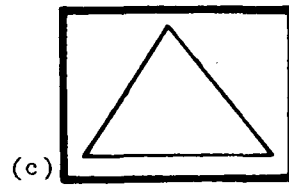
d. Circle shape :

This means continuous process, indicates progress, gives continuity and unity.

(d)
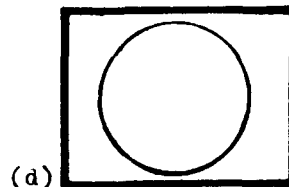
e. S shape :

An indication of grace, beauty, love, effiminacy.

(e)

f. Cross shape

This indicates the merger of interests, etc.

(f)
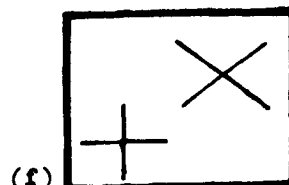
B. Qualities which a picture should have

The following qualities should be there in a good photograph. They are :

1. Contrast—There should be a synthesis of rough and smooth, black and white.

2. Balance—The picture should possess physical balance, which is also termed as psychological balance. There should also be an optical balance.

3. Climax—the picture should be in sharp focus, particularly the highpoint of the photograph should be prominently clear and focussed.

4. Cohesion—The picture should be complete in perfectness, it should have unity of thought, unity of sequence, and give a feeling of completeness.

5. Repetition—This increases the beauty of the picture and shows the continuity.

A photograph having the above mentioned qualities should be regarded as a good photograph. Of course, very few photographs have all the desired qualities. Several photographers try to bring in their photographs as many qualities of a good photograph as possible. The photograph or a picture should be able to attract the attention. It should create a powerful impact on the mind.

The following hints would be useful for those who are interested in taking good photographs. A good photograph, as said earlier, could be worth a thousand words, and leaves a permanent impact on the mind.

Hints for good photographs, composition

a. Never divide a picture i.e., the horizon line should not be in the centre of the photograph.

b. Never be vague while taking a photograph. Plan your action and understand the point of focus and be sure what is to be photographed and which part of the object is to be photographed.

c. Never be led away by the scenic beauty. Bring your object into sharp focus and just as a second thought do not try to mix up other objects with your own selected object. A waterfall might look beautiful, but if

a person sitting near the place where the water is actually touching the ground is your object, do not include the entire water-fall into your frame. Concentrate on your planned object.

d. Do not take two beauties at a time. As mentioned above do not take the photograph of the person as well as of the water-fall at one time. The two objects can perhaps make two good photographs.

e. Concentrate on close-ups. It is better to take a reasonable close-up, than a distant shot. One dose not get clarity in a long-shot where individuals persons are involved. Of coures this cannot be applied to landscapes.

f . Carefully select your theme or the object. The following tips might help in a proper selection :

    i)   Define your object, clearly imagine about the object.

    ii) Check the lighting conditions.

    iii) Adjust your angle. Follow your object as a bee does its honey hunt.

While preparing teaching aids, whether they are posters or charts or photographs, it must be remembered that aesthetic parts plays an important role. The above hints are certainly good guidelines for the imaginative teachers and students to create good teaching aids and help the communication process.

Conclusion

In preparing, selecting and applying graphic aids e.g. posters, charts, photographs, printed material, a communicator should be alive to the aesthetic part of such aids. A teacher would do wonders, if he is a bit conscious about the aesthetic part of teaching aids besides being a good teacher so far as his own subject is concerned.

VII

Production of Communication Material

Production & Procurement of Material

Of course, the material of high quality and which is really effective has to be produced by the concerned organisations. In the event of supplementing the material produced, the organisations should *procure* some more additional relevant material from other similar organisations. Same basis has got to be kept in view while procuring the material as for the production of own material. Material procured should support and supplement the original material.

In cooperative member education programme the material to be produced or procured is for two categories i.e. for the direct audience and for those who are intimately connected with the audience or its interests.

```
                                    O Members and Potential Members

                                    O Managing Committee Members

                                    O Office-bearers
┌──────────────────┐
│ Production        │              O Employees
│ and               │
│ Procurement       │
│ of educational    │◄ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
│ material for      │
│                   │              O District organisations
│                   │
└──────────────────┘              O Government Departments

                                  O Individuals - general public

                                  O Relevant organisations/agencies
```
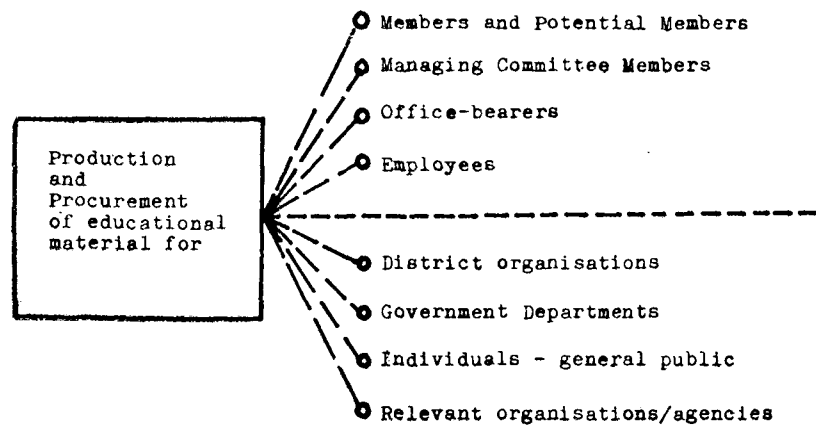
How to Produce

In the production of any communication material, the following steps have to be covered :

1. *Assessing Needs* : What sort of material is needed and in what context is it to be used ? Also in view are kept the situations e.g. areas (urban or rural), audience, sex, age groups, their educational background etc.

2. *Planning* : The type of material to be produced has to be planned i.e. style and format of the material, contents, persons responsible for the production have to be identified and named, time schedule to be prepared and a decision to be taken as to the quantity and mode of distribution.

3. *Subject-matter* : Very great care has to be taken as to what the contents should be. Relevant, factual and convincing statements and figures have to be included. Subject specialists have therefore to be consulted and specifically asked to prepare a rough outline of the material.

4. *Technical* : Subject-matter specialists and planners have to come together to express their points of view to the artists, photographers, script writers, printers, librarians, documentalists etc. This is the most important stage of production. It is here that the ideas take concrete shape. Reference material starts flowing to an "activity pit" in which the material starts taking shape.

5. *Coordination* : Planners and producers do not have sufficient time to look after various matters of detail. To look after these details and routine matters, one or two people could be named as coordinators for a particular project.

6. *Samples* : The material has now taken a shape. This is in the form of rough outlines or visuals which need to be discussed with the subject-matter specialists, planners and producers before they could be sent over for a "go ahead" signal. A lot of discussion usually takes place at this stage and a number of items are either rejected or altered or even added.

7. *Pre Testing* : The samples which have been considered and improved and re-made are sent over to the field for a simple pre-test as to check the relevancy of the material. The user notes down his reactions, problems and suggestions and collects similar information from his audience. These are then quickly

transferred to the coordinator who makes them known to the relevant people. On the basis of this pre-test, a semi-final product is prepared.

8. *Production* : The semi-final product is then duplicated and a limited number of copies are produced for being used in the field for some time to collect some more information about the material. This step could be called the post-test or evaluation of the material. After observing the reactions to the material for some time, and getting them incorporated in the final version, a final production order is placed, and the desired number of copies are prepared for distribution.

9. *Distribution* : This is normally done through the recognised channels of distribution, mainly controlled by the producing agency. Full record of distribution has to be kept for some time so as to know who received the material and where it is being used. Comments coming from the user could be recorded in the control card which could then be sent over to the producers for inclusion/ consideration in the revised version.

10. *Use* : An aid produced after such a hard labour and planning has *got to be used also*. It will be a waste of labour, energy, resources and money if the aid thus produced is not fully and effectively employed—and *if* employed does not produce the desired results. If it is not used and if it does not produce the desired results, the aid must be immediately withdrawn. It may be noted that there cannot be an evaluation if the material is not being used.

Communication material for the various categories of personnel have to be of different types i.e. office-bearers and employees should have a different set of material, for instance, how to call a meeting, how to plan activities of the society, how to maintain public relations. Some of the examples are :

National Cooperative Union of India	You are a President of a Service Cooperative (booklet)
	Why Cooperative Loans ?
	Functions of President of a Service Cooperative Society (flash-cards)
ICA Regional Office for South-East Asia	Key to Household Economy
	Balanced Diet
	Manual for Study Circle Leaders
	Communication and the Cooperative Teacher

Indore Project

Manuals for :
a. Secretaries,
b. Presidents and MC Members.
(not a rule book, but a guide of reference value).

Who to Produce

Teaching aids to be produced at the State and national level—relevance has to be kept in view. Which level could produce which aid usefully and effectively has to be identified. It has been generally observed that the most effective communication material—graphic material or printed material—can be produced at the district level. Material of general nature like the cooperative principles can be produced at the state/national level. Material related to a certain area has however to be produced at the local level itself. It is easy, cheap, practical, realistic and best suited to the local conditions.

For instance, the material produced for the farmers about a new variety of seeds for the Madhya Pradesh State, may not be really applicable within the state itself because the farming traditions and facilities in two adjoining districts in MP may not be identical. Organisations like the central cooperative banks, district unions and other similar agencies have specialised knowledge related to the needs of the farmers at the village level.

Another example can be of two States in India. The printed material and the visual material produced by the M.P. State Cooperative Union is relatively of high quality and some of the material produced is quite original. Gujarat State Cooperative Union has also produced a large amount of cooperative literature and teaching aids. But the material produced by these unions cannot be applied in all their districts effectively mainly due to the fact that there is a great difference between the districts of these two States. Material produced for Amul Dairy-dominated Kaira District of Gujarat may not be effective for an area in Saurashtra. Similarly, material intended for Bhopal or Jabalpur districts of MP State cannot be applied or effectively used in some remote areas of Bastar or Dhar or similar places.

It is therefore important that the material i.e. a realistic and effective material could be produced at the district level and material of general nature could be produced at the national or state level.

Seriousness in Production Needed

Agencies producing teaching aids and educational material *hardly find time to have them pre-tested or* evaluated. Some of them, however, who are realistic and who have time and resources and patience, do some time get opinions from a selected group of people.

In the cooperative sector particularly production of teaching aids and educational material often gets a low priority. These activities often get off the ground towards the end of the financial year and after passing quickly through the hands of various dealing officers, assistants, and artists, straightaway land in the printing press. This is rather unfortunate. It is not that this is the usual practice. It some times had to be done to save money from being termed as "unutilised". It is therefore essential that production programme has to be planned sufficiently in advance so that there is enough time left to carry out pre-testing and evaluation etc.

Time Factor

It sometimes happens that an organisation decides on producing an aid. A certain period is fixed within which the aid has to be produced. It is important that the aid must appear within this specified period. If this time table fails, an unhappy situation arises. The following results might appear :

1. Those expecting the aid might get disappointed,

2. Those associated with the production feel unhappy when their project is delayed due to "certain" people not available or red-tapism or other factors,

3. Data already collected might get out-dated, and new efforts might be needed to collect fresh material. These might result into making fresh art-work, new designs, new blocks, additional paper and, of course, increased costs of production.

Realistic Material

Problems nearest to life are preferred most by the people. A farmer feels happy, realistic when he hears his or similar to his own voice over the radio in a farmers programme, or when a farmer sees himself or his neighbour on the TV ploughing his field. It makes a great deal of difference when a real situation is brought in front of the audience.

Every simple aid produced has some *basic essentials*. Aids should be based upon the felt needs of the people and should be directly related to the cultural practice of the Region, not out of touch with reality. These should enable the villagers to identify the situations pictorially depicted by them with their inherent ease of utilisation under all circumstances ; the field worker should be able to unleash thinking and action with regard to certain beliefs and customs which hinder progress and general well-being.

So the teaching material should be based upon felt-needs, nearest to the life of the people, properly illustrated and effectively presented by the educator.

Production of Film-Strip

A film-strip is a series of still pictures in a related sequential order on a 35mm film, from two to six feet long with sprocket holes on each side. The pictures may be in colour or black & white, single or double-frame in size.

Film-strips are very effective media of bringing home a point clearer to audience. For a particular type of audience an appropriate film-strip would be necessary.

How to produce

Basic processes in producing an instructional film-strip are given below :

1. *Purpose* : What is the purpose of the film-strip? This has to be defined carefully and noted down in the production guide.

2. *Audience* : For whom the film-strip is being produced children in slum areas, or children in a most sophisticated school, members of co-operatives, or managers of consumer stores, or for the cooperative inspectors or cooperative educational instructors. In case a wrong audience is chosen, the results of the effort will not be appreciated. It is, therefore, important that the type of audience is visualised and determined before the production is taken in hand.

3. *Content Outline* : What is intended to be projected? Build one point which is the strongest around which the whole film-strip will revolve. This outline could be regarded as chapters in a series of film-strip. Remember, each frame appearing on the screen is a full chapter in itself. The process of working out content outline is therefore very important and it should be very brief and precise.

4. *Length of the Film-strip* : Determine how many frames would be needed to convey the desired message. While determining the total number of frames of the film-strip, remember the quality of the audience. Too many frames generally bore the audience and too few frames create very little impact.

5. *Script, visual content and narration or caption* : Best visuals appearing on the screen may not convey the desired message unless they are accompanied by good and brief narrations. Each visual should have a caption. These captions will be best selected from the script which will ultimately build the story and reach the climax.

Script therefore plays a very important role in the production of an effective film-strip. The script should be checked and discussed with the subject specialists. The script should also be discussed with the artists and photographers who will actually transform the script into visuals.

Narration or captions should appear in such a way that they form a link with each other. There should not appear too much of a contrast between the first frame and the second frame. The captions should be brief and meaningful.

6. *Rough visuals* : An effort should now be made to work on the type of visuals which will be included. These could be photographs, sketches, cartoons and so on.

7. *Treatment* : After reaching this stage, steps should be taken to bring the whole lot into one shape so that the final artwork could be undertaken. The treatment will be done in the following manner :

Name of the Film-Strip...

Treatment

Frame No.	Outline	Caption	Visual	Nature
—	Give a brief description of what is intended to be projected	Give an appropriate caption which is to go with the visual	Whether it is going to be a photo or art-work or cartoon etc.	Long-shot or a close up, or copy-photo from some book etc.

This list could run upto 20 frames or 30 frames. This will be the final document from which the film-strip will be made.

8. Transform this list into small cards on which editing etc. could be done. Each frame will have one card.

These cards should appear in the same sequence in which they are intended to be presented in the final form.

```
┌─────────────────────────────────────────────┐
│ TREATMENT CARD                                │
│ Name of the Film-Strip.......................│
│                                               │
│ This portion is  ┌──────────────────────┐     │
│ reserved    for  │                      │     │
│ writing out the  │  Reserved for        │     │
│ content    and   │  visuals             │     │
│ caption.         │                      │     │
│                  └──────────────────────┘     │
│ Artist/Photographer      Colour or B & W      │
│                          Frame No.            │
└─────────────────────────────────────────────┘
```

These cards should be minutely examined by the subject-specialist, programme coordinator, photographer and artist. Check spellings and the layout very carefully .

The coordinator may now assign jobs to the photographers, and/or artists so that they prepare the desired photographs and visuals.

After all the desired visuals and photographs are complete they should be mounted on flat cards.

Final captions and frame numbers should be written on these flat cards. The frame number will appear on the bottom right hand corner while the captions can appear below the visual.

These flat cards will now be ready for copying work. Before they are placed under the camera, it is absolutely necessary for the Programme Coordinator to have a very close look at all the frames and check the spellings and the correctness of the photographs and visuals.

9. *Photography* : Obtain the approval of the Programme Coordinator or the Head of the Department on each frame (on the back of each card) and give these cards for copying.

   Copying of these frames should be done by an excellent copying camera using proper lighting and film.

10. *Master negative* : The copying film after developing will be called the "master negative" which should be preserved under ideal storing conditions. Ensure that no finger prints appear on the negative.

11. *Positive Prints* : With the help of film-strip printer, make as many number of positive prints as required.

12. *Introduction guide*: Each film strip should be accompanied by some teaching notes for the help of the teacher. These teaching notes are made on the basis of the Content Outline mentioned under No. 3 and 5 above. These can be either mimeographed or printed. Each film-strip should, while leaving the issue office, have a copy of these instruction guides.

Evaluation as a part of production

Before the film-strip is really sent out for being used in the field, it is absolutely necessary to be sure that the material being put out is really "relevant." During the process of production, there should therefore be a system by which its "relevance", "effectivity", and "quality" could be studied.

The first step of the pre testing could be after Stage 8 of production. It is here that an opportunity is available to the producers to study the relevance of the material.

A simple pre-testing or evaluation could be conducted by using an Evaluation Sheet or Pre-Test Report.

Again at Stage 11 of production, another opportunity is available to further evaluate the material. Instead of taking out a large number of prints, it is advisable to pull out only a couple of prints which could be sent out to various contacts or stations in the Region for trial. Again the above mentioned Pre-Test or Evaluation Sheet could be used.

There is no doubt a break in steps of production of the material, but it is worth doing to obtain the most useful material which could be effectively used in any communication programme. It should be clearly understood that evaluation is a part of production of any communication material.
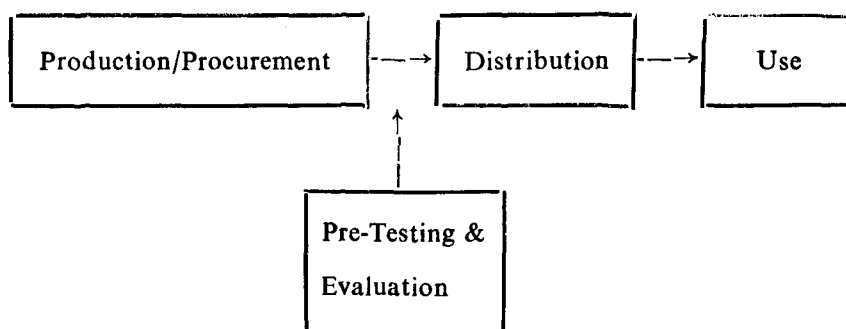
VIII

Evaluation of Communication Material

"Evaluation requires the making of judgements about the relative desirability of something in terms of a standard."

Any evaluation procedure, whether it is a standardised educational achievement test or an informal method of observing and evaluating, should be valid, reliable and useable.

While thinking of providing educational material we should have the following in view :

```
┌─────────────────────────┐      ┌──────────────────┐      ┌──────────┐
│                         │      │                  │      │          │
│  Production/Procurement │──→│  Distribution    │──→│   Use    │
│                         │      │                  │      │          │
└─────────────────────────┘      └──────────────────┘      └──────────┘
                                        ↑
                                        │
                            ┌──────────────────┐
                            │                  │
                            │  Pre-Testing &   │
                            │                  │
                            │  Evaluation      │
                            │                  │
                            └──────────────────┘
```

Production of material is a specialised field in itself. While procuring material for the audience we have to keep in view the specific needs of the trainers

and trained. Relevant material should be procured so that it aligns with the concept behind production of own material.

The cooperative organisations engaged in production of teaching aids and educational material suffer quite often due to lack of personnel who have an aptitude of simple writing, coupled with direct experiences of the field. They should naturally be aware of the needs of the people, their way of life, language, common words used and their meaning.

Pre-Testing

Pre-testing of any communication material or aid has to be done at various levels and several factors have to be kept in view to obtain the most reliable results.

Levels	1.	Own Level (producers, planners)
	2.	Colleagues Level (third person's views)
	3.	Subject-matter specialists level (authenticity)
	4.	Policy Level
	5.	Audience Level
Factors	a.	Language
	b.	Dress, costumes, style
	c.	Colour scheme
	d.	Size and other dimensions
	e.	Type of aid—which is most suited?
	f.	Actual photographs or art-work
	g.	Methodology of Pre-Testing & Evaluation
	h.	Systems and personnel including resources
	i.	Coordination to help redesigning
	j.	Age level and educational level of audience etc. etc.

Due to many obvious reasons cooperative organisations in the Region do not have enough resources, financial and personnel, to produce relevant and meaningful aids and educational material.

There should therefore be training facilities which could help the cooperative

organisations to have their people trained in these areas—simple writing, pre-testing and evaluation.

Evaluation means obtaining high quality feedback.

It is designed to improve rather than to criticise and abandon.

Anything (reasonably good) produced at the moment is good for there is a lack of material. Whatever is produced should be pre-tested and evaluated and then duplicated for greater use. Only such efforts will create a chain reaction.

An evaluation can be carried in various ways. It can take the form of questionnaires, interviews, discussions, verbal, non-verbal response.

An evaluation can be broadly classified in three ways :

1. Informal
2. Semi Formal
3. Formal Evaluation

An evaluation should clearly bring about a clear picture of the communication material. It must respond to the following :

1. Check whether objective achieved
2. Examine what was done to achieve
3. Analyse
4. Gather information
5. Apply findings

Time factor—when, how often the evaluation should be done.
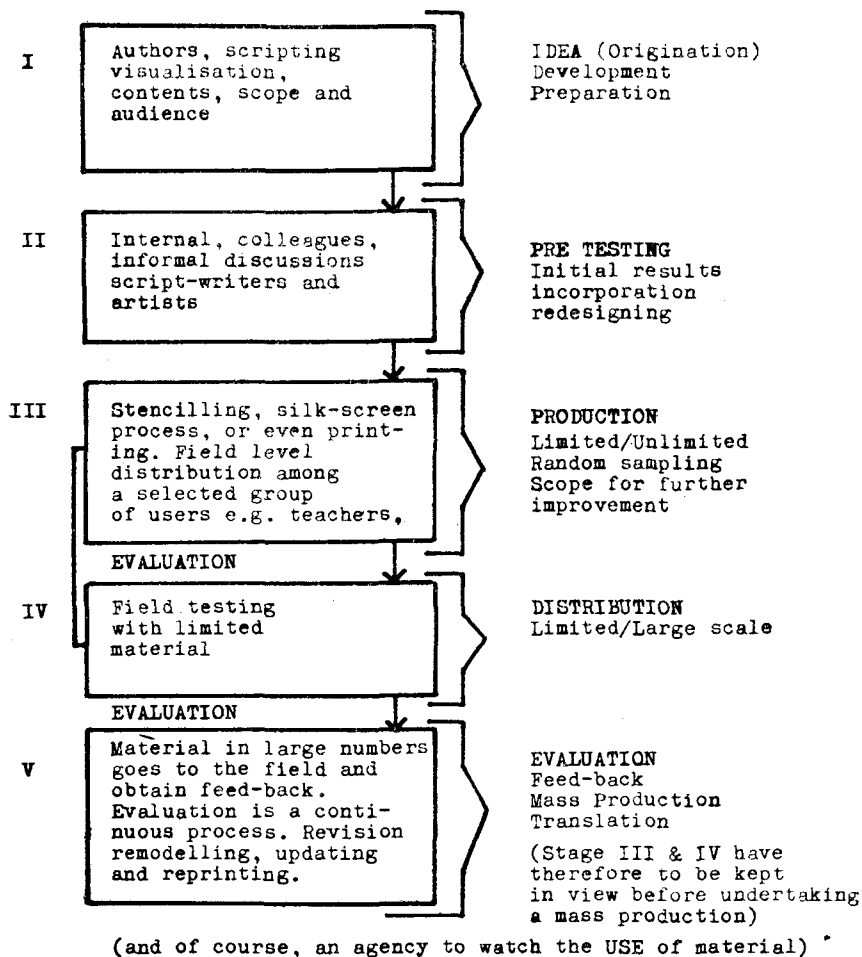Scope for improvement.
Location of agency
Form of evaluation to be adopted.

Method for teaching improvement and self evaluation would be by eliciting the opinions of the associates of the faculty who might be invited to attend the classes and offer their suggestions.

A suggestion for an *objective self-assessment* of teaching which may be helpful to the teacher would be the use of, on demand, tape-recorders. Opportunities for

tape-recording may be given to the teachers who may desire to make such records for self improvement by playing them back. Where facilities exist and circumstances permit, the use of video-tape could also be made. The teacher not only hears himself, but also sees himself behaving and moving. This helps him in improving his verbal and non-verbal cues.

The stages of production of communication material keeping "pre-testing" and "evaluation" as a part of the total production plan.

I	Authors, scripting visualisation, contents, scope and audience	IDEA (Origination) Development Preparation
II	Internal, colleagues, informal discussions script-writers and artists	PRE TESTING Initial results incorporation redesigning
III	Stencilling, silk-screen process, or even printing. Field level distribution among a selected group of users e.g. teachers, EVALUATION	PRODUCTION Limited/Unlimited Random sampling Scope for further improvement
IV	Field testing with limited material EVALUATION	DISTRIBUTION Limited/Large scale
V	Material in large numbers goes to the field and obtain feed-back. Evaluation is a continuous process. Revision remodelling, updating and reprinting.	EVALUATION Feed-back Mass Production Translation (Stage III & IV have therefore to be kept in view before undertaking a mass production)

(and of course, an agency to watch the USE of material)

IX

Some Examples

In this part of the handbook, a collection of examples of posters, charts, and other material produced by cooperative instructors have been included. By using simple art material, the participants, mostly cooperative educational instructors, lecturers of cooperative training centres in India, have produced some communication material. These might inspire the reader to prepare some more.

1. A poster done by a cut-and-paste method.

2. The poster highlights the happiness of farmers as a result of green revolution.

3. The poster tries to invite the farmer and his wife to join the cooperative society.

TAKE CARE OF YOUR HEART

4. The art work has been done on white paper. The paper has been cut in a heart-like shape and mounted on to a black poster paper.

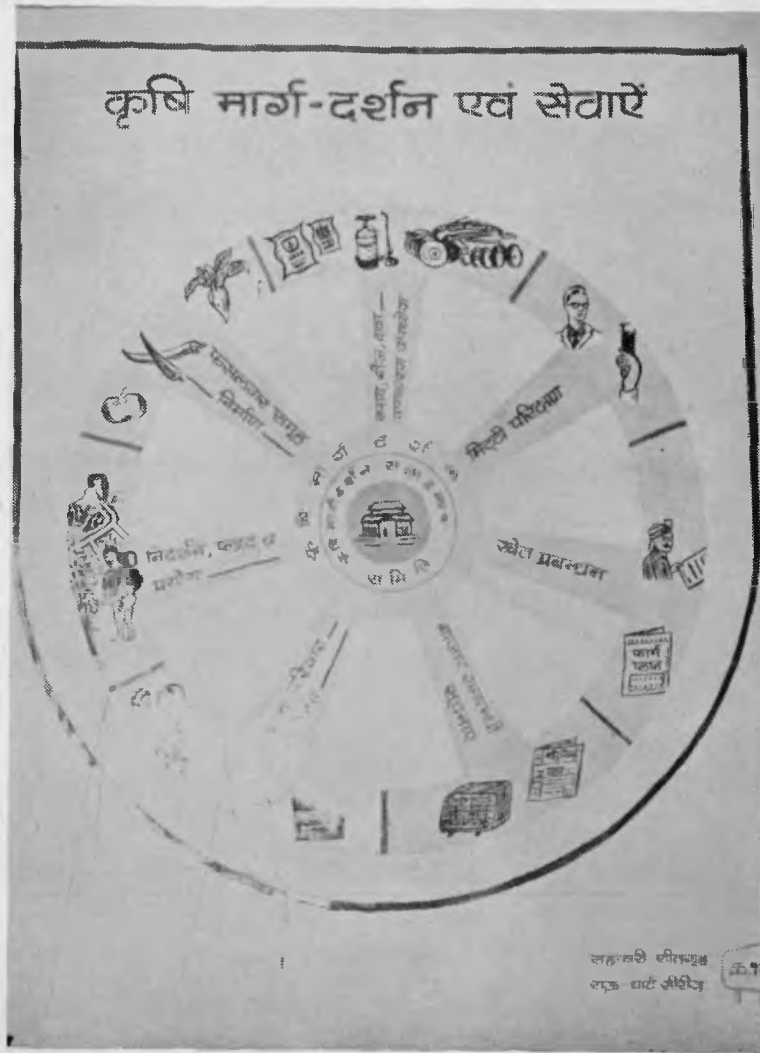(This was prepared by the author at the Centre for Educational Development Overseas (CEDO) London when he attended the Communication Media course there in 1973.)
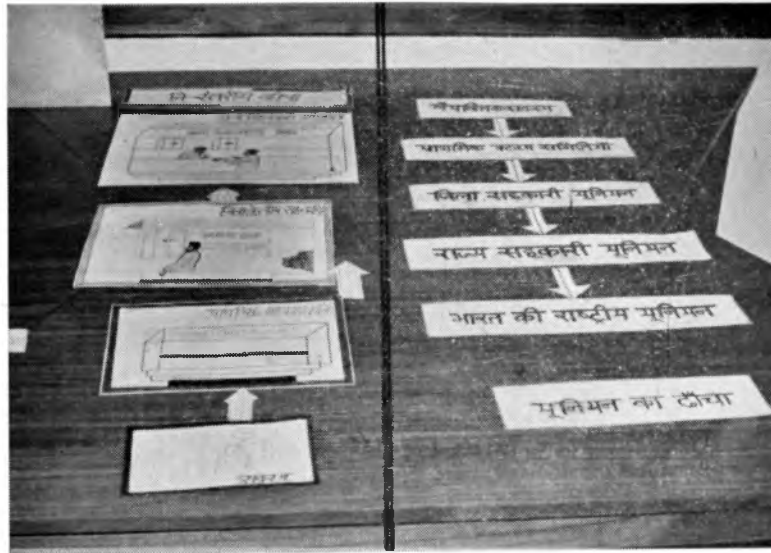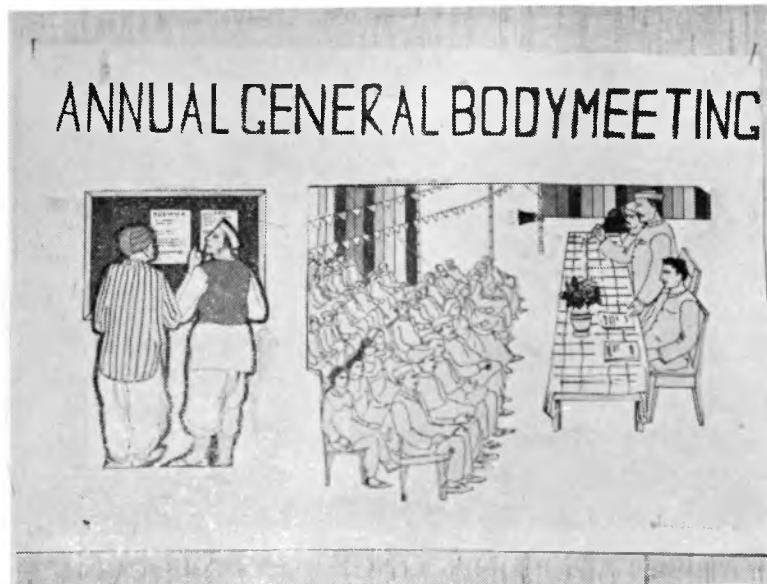
5. Educational activities of a cooperative cold store.

6. Farm guidance activities of a cooperative cold store.

7. (a) Two examples of flannelgraph.
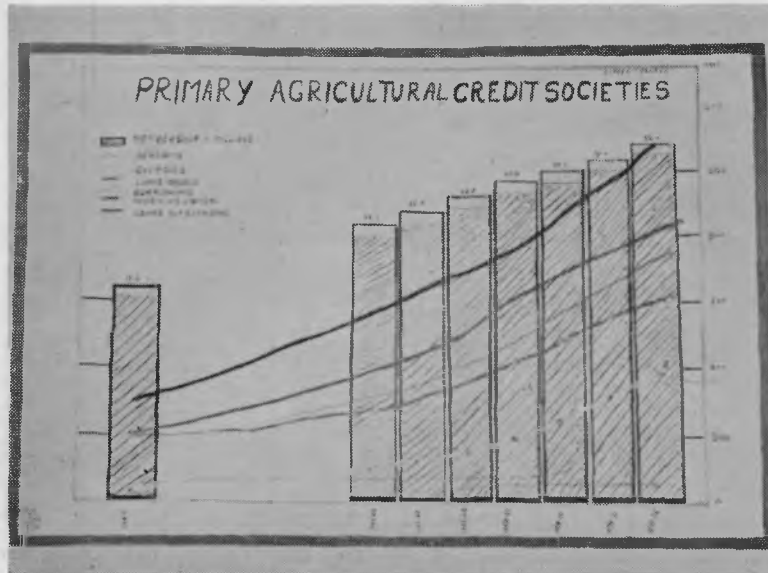

7. (b) An educational poster on Annual General meeting of a cooperative society.

8. (a) A combination of bars and lines in the graph depicting
the progress of primary agricultural credit societies.

8. (b) A slogan-oriented poster.

(Number 1, 2, 3, 7a, 7b, 8a, and 8b have been prepared by the trainees,
under the guidance of the author, who attended the workshop on audio-
visual aids conducted by the Training Centre of the National Coope-
rative Union of India in 1974.)

X

Reference Material

Reference Material on Teaching Techniques and Teaching Aids

The following references might be of great value to cooperative educational instructors, lecturers and other extension workers. Several more could be added to this list, but that depends on the initiative of the worker engaged in this task. It would, however, be advisable that cooperative organisations engaged in cooperative education and training activities should possess these books so that the educators community could benefit from them.

Ahluwalia, S.L., AUDIO-VISUAL HANDBOOK, Department of Field Services (now Department of Teaching Aids), National Council of Educational Research & Training (NCERT), New Delhi.

—,SIMPLE VISUAL AIDS FOR SOCIAL EDUCATION, NCERT, New Delhi.

Ahmed, M., AN EVALUATION OF READING MATERIALS FOR NEW LITERATES AND A STUDY OF THEIR READING NEEDS AND INTERESTS, RTP Centre, Jamia Millia, New Delhi, 1958.

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126

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Bose, J., EDUCATIONAL TECHNIQUES IN COMMUNITY DEVELOP-MENT, Orient Longmans, Bombay, 1965.

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Brown, James W., and Lewis, Richard, and Harcleroad, Fred F., A-V INSTRUCTION—MATERIALS AND METHODS. 2nd Edition. McGraw Hill, Inc., New York.

Chakrabarti, Sujit K., AUDIO-VISUAL EDUCATION IN INDIA, Oxford Book Company, New Delhi.

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Dale, Edgar, AUDIO-VISUAL METHODS IN TEACHING (3rd Edn.). The Dryden Press, Holt, Rinehart and Winston Inc., New York.

East, Morjorie, edited by Edgar Dale, DISPLAY FOR LEARNING. Holt, Rinehart and Winston, New York.

Finn, James D., THE AUDIO-VISUAL EQUIPMENT MANUAL, The Dryden Press, New York.

Goodwin, Arthur B., HANDBOOK OF AUDIO-VISUAL AIDS AND TECHNIQUES FOR TEACHING ELEMENTARY SCHOOL SUBJECTS, Parker Publishing Com., Inc., West Nyack, New York.

Hutchinson, Carl R., TEACHERS MANUAL FOR STUDY CIRCLES. National Cooperative Union of India, 125 Saryodaya Enclave, New Delhi.

International Cooperative Alliance, Regional Office & Education Centre for South-East Asia, 43 Friends Colony, New Delhi, has issued the following publications on the subject :

—Manual for Study Circle Leaders by Dr. D. Vir

—Communication and the Cooperative Teacher by Daman Prakash

—A Handbook of Teaching Techniques and Teaching Aids for Cooperative Educational Instructors by Daman Prakash (Mimeographed)

—Pre-Testing and Evaluation of Communication Material by Daman Prakash (Mimeographed)

Klausmeier, Herbert J., LEARNING AND HUMAN ABILITIES—EDUCATIONAL PSYCHOLOGY". Harper and Row, New York.

Kochhar, S.K., METHODS AND TECHNIQUES OF TEACHING. Sterling Publishers, New Delhi.

Michael Stephens & Gordon Roderick, TEACHING TECHNIQUES IN ADULT EDUCATION, David and Carles, Newton Abbot.

Mursell, J.L., SUCCESSFUL TEACHING. 2nd Edn. International Students Edition. McGraw Hill.

Naik, K.C., AGRICULTURAL EDUCATION IN INDIA, Indian Council of Agricultural Research, New Delhi.

National Cooperative Union of India, HOW CAN YOU MAKE THE COOPERATIVE WORK FOR YOU? NCUI New Delhi.

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Cooperative Education

1. Cooperative Education in India—An Approach. Rs. 0.50.

2. Education and Voluntary Movements. Rs. 6.50.

3. Manual for Study Circle Leaders by D. Vir. Rs. 10.00.

4. Cooperative Education—Report of the International Conference. Rs. 7.50.

5. A Handbook of Techniques of Teaching and Teaching Aids for Coop. Educational Instructors by Daman Prakash (Mimeographed). Rs. 10.00.

6. Cooperative Education—Progress or Perish by P. E. Weeraman (Cooperative Series No. 5). Rs. 3.00.

7. Education for Agricultural Cooperatives in South-East Asia by J.M. Rana (Cooperative Series No. 6). Rs. 3.00.

8. Report of the Regional Conference of Principals and Teachers of National Cooperative Training Institutions (Cooperative Series No. 16). Rs. 10.00.

9. Report of Regional Seminar on Cooperative Member Education and Communication (Cooperative Series No. 15). Rs. 15.00.

10. Communication and the Cooperative Teacher by Daman Prakash. Rs. 20.00

Agricultural Cooperation

11. Agricultural Cooperative Credit in South-East Asia. Rs. 20.00.

12. Farming Guidance in the Cooperative Movement in Japan by S. Miyakawa (Cooperative Series No. 3). Rs. 2.50.

13. The Role of Cooperatives in Agricultural Development (ICA/AARRO Conference). Rs. 5.00.

14. Farm Guidance Activities of Agricultural Cooperatives (Cooperative Series No. 4). Rs. 10.00.

15. Amalgamation of Primary Cooperatives—The Japanese Experience by Lionel Gunawardana. Rs. 15.00.

16. Multipurpose Cooperative Societies with special reference to Japan—Report of Regional Seminar. Rs. 5.00.

17. Multipurpose Cooperative Societies in South-East Asia by J.M. Rana. Rs. 20.00.

18. Long-term Agricultural Development Programme through Agricultural Co-operatives and Technical Assistance by M. V. Madane (Cooperative Series No. 11). Rs. 3.00.

19. Amalgamation of Primary Agricultural Cooperatives in the Republic of Korea by Lionel Gunawardana (Cooperative Series No. 17). Rs. 12.00.

Consumer Cooperation

20. Economics of Consumer Cooperatives by M. Radetzki (Cooperative Series No. 1). Rs. 5.00.

21. Shop Planning & Management—Report of International Conference (Mimeographed). Rs. 10.00.

22. Readings in Consumer Cooperation. Rs. 20.00.

23. A Study of Personnel Management in Selected Cooperative Super Markets in India by Ragnar Arvidsson and K.K. Taimni. Rs. 12.00.

24. Sale A Profile—An Introduction to Sales Management in Retailing by Ragnar Arvidsson and S. Dandapani. Rs. 20.00.

25. Business Switch—An Introduction to Business Management in Retailing by Ragnar Arvidsson and S. Dandapani. Rs. 20.00.

26. Key to Household Economy by Margaret D'Cruz (Cooperative Series No. 7). Rs. 3.00.

Cooperative Law

27. A Model Cooperative Societies Law by P. E. Weeraman. Rs. 3.00.

28. Cooperative Principles by P. E. Weeraman (Cooperative Series No. 10) Rs. 5.00.

29. Indian Cooperative Laws vis-a-vis Cooperative Principles by P. E. Weeraman, R. C. Dwivedi & P. Sheshadri. Rs. 40.00.

30. The Effect of Cooperative Law on the Autonomy of Cooperatives in South-East Asia by P. E. Weeraman (Cooperative Series No. 14). Rs. 5.00.

Cooperative Management

31. Cooperative Management—Report of Regional Seminar held in the Philippines. Rs. 7.50.

32. Readings in Cooperative Management (in press).

State and Cooperation

33. State and Cooperative Development. Rs. 20.00.

34. Forms of Government Aid and Cooperative Democracy in S-E Asia by J. M. Rana (Cooperative Series No. 12). Rs. 5.00.

International Cooperative Trade

35. Cooperative Trade Directory for South-East Asia. Rs. 10.00.

36. Cooperative Trade Directory, First Supplement. Rs. 5.00.

37. Cooperative Trade Directory, Second Supplement. Rs. 5.00.

38. International Cooperative Trade in South-East Asia by M. V. Madane. Rs. 3.00.

Cooperative Housing

39. Cooperative Housing—Report of 1964 Seminar. Rs. 2.00.

40. Status of Cooperative and Rural Housing Programmes in Bangladesh Today by Lionel Gunawardana and D.D. Naik (Cooperative Series No. 9). Rs. 3.00.

41. Readings in Cooperative Housing. Rs. 20.00.

Others

42. Cooperative Leadership in South-East Asia. Rs. 8.50.

43. Cooperation and Small Industries in S-E Asia by J. M. Rana (Cooperative Series No. 2). Rs. 1.50.

44. The Role of Cooperation in Social and Economic Development. Rs. 10.00.

45. Research in Cooperation in India—A Review. Rs. 5.00.

46. Trade Unions and Cooperatives : Report of Experts' Conference. Rs. 2.00.

47. Directory of Cooperative Organisations in South-East Asia (Mimeo). Rs. 3.50.

48. Cooperative Press in South-East Asia (Mimeographed). Rs. 2.50.

49. Professor D.G. Karve Commemoration Volume. Rs. 50.00.

50. ICA in South-East Asia—The First Decade by Lionel Gunawardana. Rs. 12.00.

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