

Proceedings
of the All-India
Teachers Conference
on Audio-Visual Education

held at the
Central Institute of Education
Delhi
July 7-13, 1956

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PROCEEDINGS
of
THE ALL-INDIA TEACHERS' CONFERENCE
ON AUDIO-VISUAL EDUCATION

held at
the Central Institute of Education, Delhi.

JULY 7-13, 1956



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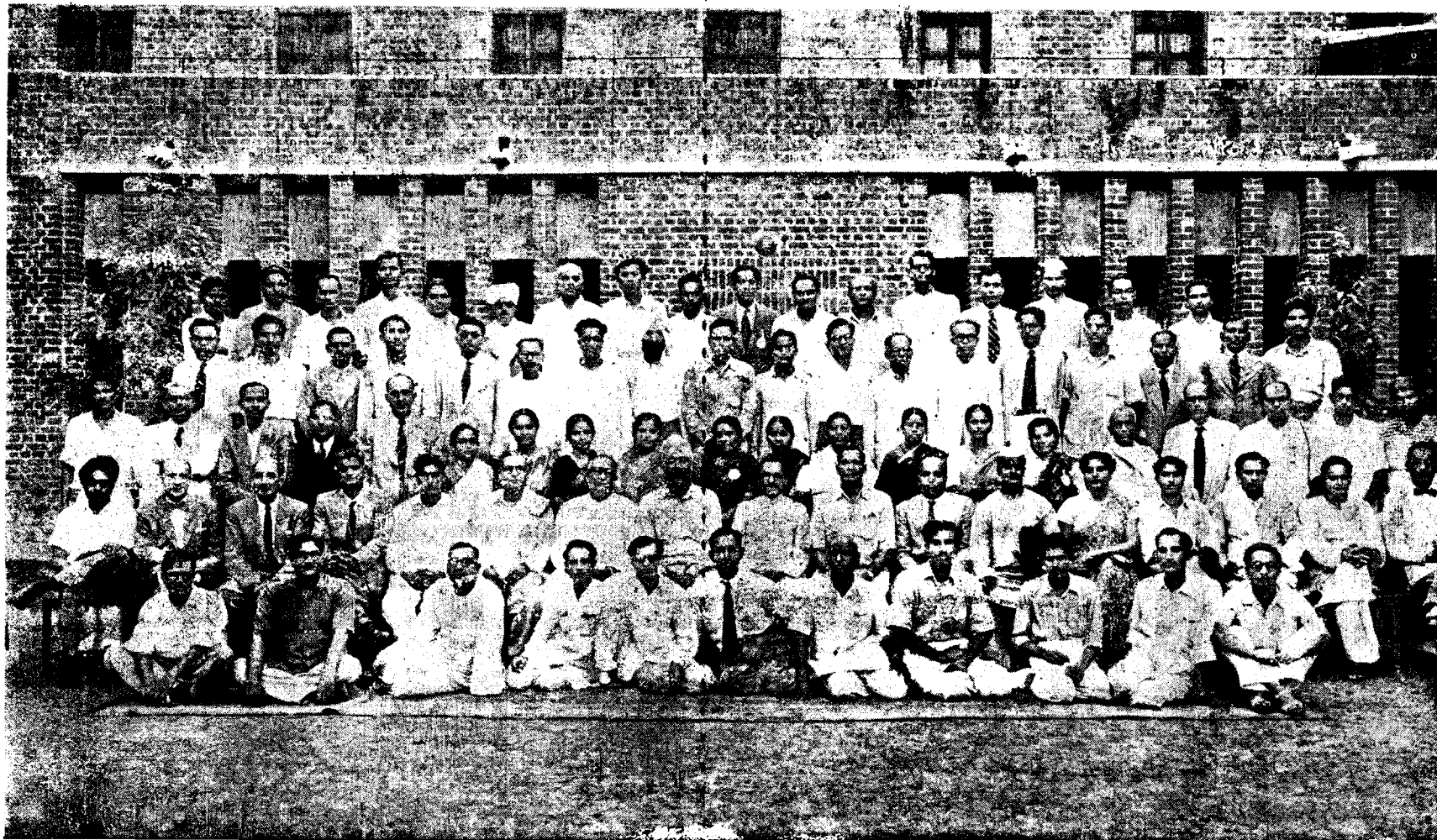
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- (From L-R) *Sitting* (Chairs) H.S. Bholā, D.W. Morris, J.B. Wilson, G.V. Tagare, J.N. Sharma, P.D. Shukla, A.N. Basu, Sohan Singh, K.G. Saiydaīn, H.P. Kulserashta, G. Renu, S.N. Srivastva, Mrs. H.J. Moos, R.S. Bhalla, Seeta Prasad, K. Mahanty, S.M. Majumdar.
- „ „ (Ground) Kishan Chand, P.B. Chakarvarti, G.B. Chatterji, Bidyadhar Sharma, V.C. Bhat, K.D. Ahuja, S. Albert, S.K. Bhal, Dev Datt, R.S. Sud, R. Dass Gupta.
- „ „ *Standing (1st Row)* Sewa Ram, Taj Behari Lal, S.M. Hasan, K.R. Deshpade, D. Sarma, Mrs. A. Chatterji, Mrs. P. Dass Gupta, Miss K. Roy, Mrs. Ambu G. Tagat, Mrs. R.R. Shrivastva, Miss M.K. Gadgil, Mrs. K. Mehalwal, Miss K. Jagthambal, Miss G. Chakravarti, Mrs. Raj Sehgal, H.S. Raghavindra Rao, V.S. Bhatnagar, D.D. Bhargva, J.K. Saxena, S.S. Bhatia.
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All - India Teachers Conference on Audio - Visual Education, New Delhi, July, 1956.



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FOREWORD

The new audio-visual techniques developed in recent years have a special role to play in the education of children and—together with the traditional methods which can be integrated with them—they can help them to acquire that facility in the effective use of the hand and the brain which has given to man his paramount position in the world. In our country this has not yet been fully realized and it is necessary to make our educationists and teachers sensitive to our inadequacies in this field and keep them in touch with promising lines of advance, which are being tried in this or other countries. This is the main consideration underlying Government of India's programme of Audio-Visual Education Seminars and Conferences. The All-India Teachers' Conference on Audio-Visual Education—the Report of which is now being published for the use of all teachers—was the fourth event in this series. It covered a wide field of related themes, ranging from the general problem of Audio-Visual education to specific topics like films and filmstrips, charts and pictures, silk-screen, field trips and aural aids like school broadcasts and linguaphone records. It is a matter of some satisfaction that a goodly proportion of papers read were contributed by officers connected with the Audio-Visual Section in the Ministry who brought their personal experience to bear on the problems discussed.

The Conference has suggested some interesting lines of development which our teachers and educationists may well explore with advantage. I would like to invite attention to a few of them here. Firstly, in schools where the size of the staff allows some chance for specialisation, at least one teacher should be given the opportunity to specialise in audio-visual aids and thus become a nucleus for all the connected activities in this field and be available to help his fellow teachers in improving their techniques of audio-visual education. I hope some of our bigger Secondary schools will try to explore this possibility.

Secondly, our teachers and producers of audio-visual aids should give up their cold unconcern for each other's business and come to speaking terms. Then alone can they tackle the problems involved successfully. While the former know what is really needed in the school-room and can provide necessary educational guidance, the latter have the resources and the technical skill to provide it. They can cooperatively generate a movement for the production of better, more effective and more plentiful indigenous audio-visual aids, so necessary for the education both of children and adults. The first move in this direction must, I feel, come from the producers who can draw the teachers into creative partnership.

(ii)

Thirdly, our teachers have yet to exploit fully, through field-trips and hikes and excursions, the inexhaustible lure that the new and the unexplored holds for children and youth. Within reasonable limits, such field-trips can be of immense use. While the main responsibility for actually leading the children on to this educational path is the teacher's, the Education Departments must help them by compiling suitable guides and other relevant materials, pertaining to places of interest in the State, to which they can take the children for the broadening of their vision and creation of new interests.

It was a happy thought for the Conference to take up the subject of Film Appreciation in schools. The Cinema is now an inevitable fact, at least in urban areas, and it is impossible to exaggerate its importance. You must have noticed how cinema posters, sometimes bordering on the bawdy, assail the immature and half-sophisticated adolescent and adolescent-like minds with such frequency that they produce an undesirable impact on many persons. The only feasible defence against this subtle but persistent aggression is the defence that can be built up in the minds of children and youth. It is the inescapable duty of all who love them, and specially of our teachers, to help in building these defences by a well-thought out scheme for developing film appreciation. Such a well planned course will not only rescue impressionable minds from a veritable menace by teaching them to distinguish between the first-rate and the third-rate, but also transform the potential "menace" into a welcome ally of the educationist in the task of training the mind and emotions of young persons.

I hope many of our teachers, who read this Report, will be persuaded to explore these and other suggestions and give them a concrete shape through their creative work.

K. G. Saiyidain

10th April, 1957

Educational Advisor to the Government of India

INTRODUCTION

The All-India Teachers' Conference on Audio-Visual Education was organised by the Ministry of Education during 7-13th July, 1956 at the Central Institute of Education, Probyn Road, Delhi, in pursuance of its programme of making the administrators and teachers, engaged in the great task of elevating the educational level of our people, sensitive to the need for the techniques of audio-visual education. The three Seminars held previous to the Conference benefitted mainly the administrators, while the Conference was organised mainly for the benefit of the Secondary school teachers.

The Conference had four specific objectives in view, namely, (a) to create an interest in the potentialities of simple audio-visual aids, (b) to provide information regarding modern audio-visual aids and equipment and recent developments in the field, (c) to provide an opportunity for the exchange of teacher-experiences in the use of audio-visual aids and, (d) to strengthen the movement for audio-visual education by acquainting the teachers with the facilities Central and State Governments were offering for the purpose.

While the selection of the delegates was left to the State Governments, the following suggestions were made by the Ministry of Education for the consideration of the State Governments :

- (i) The delegates should have some interest and, if possible, some experience in audio-visual methods ;
- (ii) Preference should be given to young and enthusiastic teachers or even older teachers who have a real desire to learn and apply new methods ; and,
- (iii) women teachers should be fairly represented.

The strength of the delegates in respect of Part 'A', 'B', 'C', States was fixed at 5, 3, and 2 respectively but the State Governments could sponsor additional delegates if they so desired.

Every delegate was required to present to the Conference a paper on any of the following topics of audio-visual education to be considered at the Conference :

- (a) Audio-Visual Education in India To-day.
- (b) Use of the Black Board and the Bulletin Board.

- (c) Use of Maps and Charts.
- (d) School Broadcasts.
- (e) Use of Films and Filmstrips.
- (f) The Educational Field-trip.
- (g) Film Appreciation for Schools.

It was also decided to hold a small exhibition of audio-visual aids and equipment along with the Conference, so that delegates could make themselves familiar with the audio-visual aids being used in schools in India and abroad.

**ALL-INDIA TEACHERS' CONFERENCE ON AUDIO-
VISUAL EDUCATION (July, 1956)**

PROCEEDINGS

I. The All-India Teachers' Conference on Audio-Visual Education was inaugurated at 8.00 a.m. on Saturday the 7th July, 1956 in the Auditorium of the Central Institute of Education, Delhi by Dr. A. N. Bannerji, Director of Education, Delhi State.

Welcoming Dr. A. N. Bannerji and the delegates, Dr. A.N. Basu, Principal, Central Institute of Education, Delhi, expressed the hope that the Conference would afford an opportunity to the participants to come to valuable conclusions through personal contacts. He appreciated the efforts of the National Government that was doing its best to introduce new methods into the educational field.

II. Dr. A.N. Bannerji, Director of Education, Delhi State, emphasised in his inaugural address the value of audio-visual aids as means of making facts and ideas readily understood and easily grasped by students. He referred to audio-visual education work in Delhi State, explained how it had contributed to the success of Adult education in the rural areas and how it had induced the village people to open schools for their children. He particularly emphasised the importance of inexpensive aids that are relevant to our conditions. Later, Dr. Bannerji declared open the Exhibition of audio-visual aids and equipment organised by the Ministry of Education at the Central Institute of Education.

III. At the open session following the inauguration, Shri Sohan Singh, Director of the Conference, explained to delegates the way in which the Conference would do its work. The day-to-day programme of the Conference was made available to them. The delegates were then divided into four groups and group leaders were selected. The Conference began its deliberations on the afternoon of 7th July, 1956, and completed them on the afternoon of 12th July.

IV. The recommendations of the Conference, as passed by the Plenary Session on the 13th July, 1956 are at Appendix B.

V. The Conference held its valedictory session at 6.00 p.m. on Friday the 13th July, 1956. Shri K. G. Saiyidain, Secretary, Union Ministry of Education presided. Shri Sohan Singh, Director of the Conference read his report of the work of the Conference (Appendix C).

VI. In his valedictory address the President explained the "audio-visual approach" to education and warned his hearers against a misuse of audio-visual aids. (For the text of his speech see Appendix D).

VII. Dr. P.D. Shukla, Deputy Educational Adviser to the Government of India, moved a vote of thanks for those who had cooperated and worked to make the Conference a success.

VIII. A vote of thanks on behalf of the delegates was moved by Shri G. Renu from Mysore.

APPENDIX "A"

**Programme of the All-India Teachers' Conference on Audio-Visual
Education (July 7-13, 1956), Central Institute of Education,
Probyn Road, Delhi.**

7th July, 1956 :

Morning :

8-00 a.m.

Welcome Speech

—A.N. Basu

Inaugural Address

—A.N. Bannerjee.

9-00 a.m.

Delegates go round the Exhibition

10-30 a.m.

Day-to-day working of the Conference

—Director

Afternoon :

2-30 p.m.

Audio-Visual Education in India Today

—J.N. Sharma

The Central Film Library

—Nilima Devi

Evening :

7-30 p.m.

Screening of educational films Introduced by
Shanker Narain

8th July, 1956 :

Morning :

8-00 a.m.

Use of Black Boards and Bulletin Boards

—J.N. Sharma

—J.L. Azad

10-00 a.m.

Group Discussions

Afternoon :

2-30 p.m.

Plenary session—Recommendations on the Use of Black
Boards and Bulletin Boards

Evening :

7-30 p.m.

Screening of films on Science Introduced by
J.N. Sharma

9th July, 1956 :*Morning :*

8-00 a.m.

The Use of Posters and Charts in the classroom
—John B. Wilson
—H.S. Bhola

9-30 a.m.

The Educational Broadcast
—M. Choksi
—H.S. Bhola

11-00 a.m.

Group Discussions

Afternoon :

2-30 p.m.

Plenary session—Recommendations on the Use of Posters
and Charts in the Classroom and the Educational
Broadcast

Evening :

6-00 p.m.

Preparing Relief Models
—S.L. Ahluwalia

7-00 p.m.

Linguaphone Records—a demonstration—talk
—H. J. Moos

10th July, 1956 :*Morning :*

8-00 a.m.

Educational Use of Films and Filmstrips
—M.V. Krishnaswamy
—Shankar Narain

10-00 a.m.

Group Discussions

11-30 a.m.

Plenary session, Recommendations on the Use of Films
and Filmstrips.

Afternoon :

2-30 p.m.

Field-trip

—Sohan Singh

—S.S. Bhatia

Evening :

7-30 p.m.

Documentaries—Introduced by H.S. Bholia

11th July, 1956 :*Morning :*

7-00 a.m. to 1-30 p.m.

A visit to places of educational and historical interest

Afternoon :

FREE

Evening :

7-00 p.m.

Some Educational Films

9-00 p.m.

Variety Programme

— Delegates

12th July, 1956 :*Morning :*

8-00 a.m.

Group Discussions on Field-trip

9-00 a.m.

Plenary session—Recommendations on the Educational
Field-trip

10-30 a.m.

Film Appreciation for Schools

—H. J. Moos

—P.D. Khera

Afternoon :

2-30 p.m.

Group Discussions

3-30 p.m.

Plenary session—Recommendations on Film Appre-
ciation for Schools*Evening :*

7-30 p.m.

Screening of feature films Introduced by P.D. Khera

13th July, 1956 :

Morning :

8-00 a.m.

Handling Filmstrip Projector—Shanker Narain

9-00 a.m.

Demonstration of silk-screen printing

—D.W. Morris

10-30 a.m.

Making Hand-made filmstrips

11-30 a.m.

Demonstration of the first sound filmstrip produced in India : "Flowers of Bombay"

--H. J. Moos

Afternoon :

3-00 p.m.

Plenary session—Finalisation of Recommendations

Evening :

6-00 p.m.

Valedictory session

Address by K. G. Saiyidaip,

Secretary, Ministry of Education.

APPENDIX "B"

RECOMMENDATIONS OF THE CONFERENCE

I. GENERAL :

1. For the proper development of audio-visual education in India, it is necessary that every State Government should have : (a) an Audio-Visual Aids Section in its Education Department ; and (b) an Audio-Visual Aids Training Centre, for which the State Governments should be eligible for Central help.

2. When teachers are sent for training in an Audio-Visual Training Centre, they should be treated as on duty for the period of such training.

3. In States where no special fee is levied for audio-visual education, the expenditure on audio-visual aids equipment and that on the preparation of audio-visual aids incurred by a school should be treated as a legitimate charge on non-governmental funds, such as the Boys' Fund ; where special audio-visual education fee is levied, it should cover the expenditure on audio-visual aids equipment and preparation of audio-visual aids.

4. State Education Departments are requested to investigate handicaps in the way of greater use of audio-visual aids in Secondary schools and ways and means to overcome the handicaps.

5. In the interest of uniform development of audio-visual education in Secondary schools in the country, State Governments are requested to organise visits of school teachers to places in the States or in other States where particularly significant audio-visual educational work is being done.

6. The Conference requests Teachers' Training Institutions to take up search in the materials, availability and cost of various types of audio-visual aids.

7. The Conference advises every school and especially every Secondary school to have one of its teachers specialized, if possible, trained in the use of audio-visual aids as well as in film appreciation and to give him sufficient opportunities to utilize his knowledge and skill for the benefit of the whole school.

8. The Conference invites the attention of commercial producers of audio-visual aids to the desirability of inviting the collaboration of competent subject-teachers in the preparation of these aids for them.

II. BLACK BOARDS :

1. The Conference is of the view that there should be no classroom without its black board and the expenditure on it should be the first charge on the fund for purchase of school equipment.

2. Teachers' Training Institutions are requested to give due importance ~~in~~ ^{to} their curricula to the proper use of black board, including lay-out, captions, handwriting, etc. It is also suggested that they should investigate the utility of plate-glass blackboards. Further, the Extension Agencies, attached to some of the Teachers' Training Institutions should organize weekend courses for teachers in the use of black boards and bulletin boards.

III. BULLETIN BOARDS :

1. The Conference is of the view that the bulletin board has an integral place in modern educational methods. In this connection, it invites schools to observe the following standards :—

- (a) every class should have its bulletin board ;
- (b) a school as a whole should have its bulletin board ;
- (c) if a school has separate middle and higher secondary departments, the two departments should have their separate bulletin boards ;
- (d) in large schools divided into houses, every house should have its bulletin board.

2. The Conference recommends that school children should be encouraged to make their own bulletin boards from insolated sheets or cellotex, if possible otherwise from local material, such as bamboo sticks, mats, etc.

3. For the guidance of teachers, the Conference recommends that they should observe the following three principles in encouraging the use of bulletin boards by pupils :—

- (a) the bulletin board is a perpetual magazine of the class or the school, designed to give the pupils information of direct concern to them and to tap their curiosity and desire for knowledge ;
- (b) at any time a bulletin board should present an aesthetic unity, a harmony in the lay-out and illustration of various elements that go in its making ;
- (c) The material on the bulletin board should be entirely a result of the creative effort of pupils, may be under the general guidance of the teacher. It should be the work of the pupils, by the pupils, for the pupils.

IV. POSTERS AND CHARTS :

1. The Conference draws the attention of Secondary school teachers to the great scope for the use of charts, posters and models of local interest, prepared by teachers and students themselves.

V. EDUCATIONAL BROADCASTS :

1. State Governments are requested to provide radio-sets in all Secondary schools and Teachers' Training Institutions. The maintenance of radio-sets in schools should be the responsibility either of the Radio Station serving the area or the State Government.

2. The Conference draws the attention of the Director-General, All India Radio to the desirability of: (a) arranging timings of educational broadcasts so that the largest number of schools in an area can benefit from such broadcasts from the Station which serves the area; (b) utilizing to a greater extent than hitherto the services of competent teachers in the planning of educational broadcasts and children's programmes; (c) setting up a Research Unit in All India Radio for evaluating the effectiveness of existing school broadcasts and of exploring the possibilities of introducing improvements in them so as to exploit fully their educational potentialities.

3. The Conference recommends that Secondary school teachers should make the fullest possible use of educational broadcasts.

VI. FILMS AND FILMSTRIPS :

1. In view of the generally recognised value of films and filmstrips in education, the Conference recommends that the State Governments should on the one hand take immediate steps to set up State Film Libraries and on the other hand see that, as soon as possible, every Secondary school has a 35mm filmstrip projector with a 2"x2" slide attachment and, if possible, also 16 mm. film projector, as an integral part of the school equipment.

2. The State Education Departments should have a Mobile Cinema Van for every district for audio-visual service in rural areas.

3. The Audio-Visual Sections, already recommended for every Education Department, should have experts who can prepare filmstrips and slides with the help of teachers, who should be encouraged to contribute scripts for the purpose.

4. In view of the responsibilities which the Government of India have already accepted in the field, they are requested to: (a) stimulate the agencies concerned to have larger programmes for the production of films and filmstrips for use in Secondary schools; (b) to give a subsidy to a State Government desiring to set up a unit for the production of films and filmstrips; (c) to sponsor the production of films for teaching Hindi; (d) to sponsor experiments in the manufacture of cheap filmstrip projectors.

VII. FIELD-TRIPS :

1. The Conference draws the attention of teachers to the great and many sided educational value of field trips and therefore, to the need to introduce the use of field trips more and more in their work. •

2. The Conference is of the view that State Governments have a responsibility in encouraging field-trips by school students. They could discharge this responsibility by : (a) treating expenditure on field-trips as "approved" expenditure ; (b) providing transport facilities for field-trips free, if possible, otherwise at special concessional rates ; (c) assisting the Youth Hostels Movement to a greater extent than hitherto, to enable school students to take longer trips and in greater numbers ; and (d) preparing a directory of places of historical, scientific and other educational interest in their States.

3. The Government of India is requested to subsidise liberally State Government programmes in the field of school journeys.

VIII. FILM APPRECIATION :

1. The Conference feels that there is an urgent need to raise the taste of children in films, both as a defence against undesirable movies as well as a source of enhanced enjoyment of good films. Here, however, there are hardly any precedents to go by, and hence it feels that the Government of India have a special responsibility in initiating worthwhile experiments and projects in the field. In particular, the Conference recommends that they should : (a) start short duration courses for teachers to equip them with some knowledge and skills to start film-study in their schools ; (b) start a monthly publication on feature film releases to furnish the teachers material to guide school pupils ; and (c) ask exhibitors and show-houses to provide facilities for the screening of special films for children at concessional rates for teachers and pupils, at least once a month.

2. As school children cannot remain unaffected by the standard of film taste prevailing in the general community, the Conference is of the opinion that efforts must be made to raise their standard. This can best be done by setting up film societies in centres of large population. The Conference, therefore, recommends that the Government of India should sponsor a movement for film societies.

APPENDIX 'C'

DIRECTOR'S REPORT

Mr. Chairman,

This is the sixth of the series of conferences/seminars organised by the Ministry of Education to give an impetus to the movement for enriching the education of children and adults with the help of audio-visual aids. This Conference, however, had one distinctive feature. Whereas the previous conferences/seminars assembled, what we may call, the "wholesalers" of audio-visual aids that is to say, the administrative and organisational personnel responsible for audio-visual education in the States—the present Conference has been intended to give a large place to the "retailers" of audio-visual aids, the teachers who directly deliver the goods to children in schools. Thus, 40 out of the 73 delegates in the Conference are teachers or headmasters of schools.

Twenty-two States from Indian Union have sent 73 delegates and experts to the Conference. Besides 33 teachers and seven headmasters, there are 20 lecturers in Teachers' Training Institutions and nine Inspectors of Schools, some of them responsible for audio-visual education.

The delegates to the Conference were accommodated in the hostel of the Central Institute of Education and Gwyer Hall. We are specially grateful to the Principal of the Central Institute of Education who, with his usual generosity, has provided not only the accommodation but also all other facilities needed by us for the Conference.

An attractive aspect of this Conference has been the Exhibition which, though mainly organised by the staff in the Audio-Visual Section of the Ministry, has received valuable material from other sources. Commercial concerns complied readily with our request to them to avail themselves of the Exhibition to display their audio-visual equipment. Some enthusiastic delegates had also brought in aid used or invented by them in the course of their work.

The organisers of the Exhibition have been proud to see literally hundreds of visitors arriving to see it. Some of them took notes on the exhibits. On the whole, it was a useful stimulating Exhibition and we have received requests to extend it for another week after the Conference.

Before proceeding to give a summary of the work of the Conference I should like to mention here one other "extra curricular" activity of the Conference. This was the excursion which the delegates had on 11th July. We had intended the Conference to be a severely practical one, but we found that work has to be tempered with recreation even as justice has to be tempered with

mercy. The excursion covered the well known points of interest at Delhi, namely Qutab Minar, Hauz Khas, the National Physical Laboratory, Red Fort, Parliament House and also the Workshop of the Krishna Model Manufacturers.

Though the Conference started with a little disappointment in not having you, Sir, in our midst, it soon got smoothly into gear. After an introductory speech by Dr. A. N. Basu, Principal of the Central Institute of Education, Dr. A. N. Bannerji inaugurated the Conference. He provided a useful background to the work of the Conference by explaining the place of audio-visual aids in education to-day and also by giving a broad view of the audio-visual education work being done in the Delhi State, especially in the field of social education.

The work of the Conference was twofold. The plenary sessions and the group discussions were devoted to the thrashing out of theoretical and practical points concerning the various aspects of audio-visual education. In the evenings some of the outstanding films were screened. Demonstrations were also given in the preparation of relief models, use of linguaphone records, handling of film strip projectors, preparation of posters by silk screen method of printing and making of handmade filmstrips.

The work of the Conference was inspired by the faith that audio-visual aids greatly help in clarifying and enriching concepts and thus help to widen the sweep of children's and adults minds. The work was conducted along the following lines :

First, papers contributed by the delegates or the members of the staff of the Audio Visual Section of the Ministry were read. Later, the delegates asked the contributors of the papers to elucidate certain points and also to elicit information on relevant points which might have been omitted or not sufficiently stressed in their papers. The Conference afterwards broke up into four groups. The groups selected their leaders and rapporteurs. The following were the leaders of the various groups :—

1. Shri H.P. Kulasrashta from Himachal Pradesh.
2. Shrimati H.J. Moos from Bombay.
3. Shri G. Renu from Mysore.
4. Shri S. N. Srivastava from Bihar.

There were lively discussions in the groups. The groups gave their recommendations for promoting and improving the use of the audio-visual aids which they discussed on a particular day. The recommendations were chiefly of four types—(a) Recommendations to the Government of India ; (b) Recommendations to the State Governments ; (c) Recommendations to teachers ; and (d)

Recommendations for improving the working of any future Conference/Seminar on Audio-Visual Aids.

Besides discussing the present state of audio-visual education in the country the Conference concerned itself with the following subjects :

- (a) Use of black boards and bulletin boards.
- (b) Use of posters and charts.
- (c) Educational broadcasts.
- (d) Use of films and filmstrips.
- (e) Field trips, and
- (f) Film appreciation.

It may appear that too many subjects were discussed at the Conference. On the other hand, some delegates felt that there was room in other subjects. As is usual in life, the present set of subjects was a compromise, and we hope a happy compromise.

The Conference concerned itself on the first day with the present position of audio-visual education in the country. We were pleasantly surprised to note that more was being done in the field of audio-visual education than was apparent from the laconic reports of State Governments. We were happy to find that enthusiastic teachers were enriching the education of their pupils through audio-visual aids carrying them through single-handed, and by virtue of the sheer force of their own interest in the subject.

We also took the opportunity to explain the working of the Central Film Library on the first day.

In discussing the use of the black boards and bulletin boards on the second day of the Conference some of us were taken aback to learn that some schools lacked even the elementary equipment of a black board. We thus found ourselves under the necessity to make a recommendation which, but for this background, would look puerile, namely, that every class in every school should have a black board.

The Conference took a lively interest in the educational potentialities of the bulletin board. The teachers were strongly advised to encourage their pupils to express themselves creatively on the class or school bulletin boards. The bulletin board was to be treated as a perpetual magazine of the pupils, for the pupils, by the pupils.

In discussing charts and posters, we were happy to have with us Mr. J. B. Wilson of the Technical Co-operation Mission, of America and India who has so much identified himself with the cause of audio-visual education in India. His

talk was both stimulating and illuminating on the essential nature and correct use of charts and posters. Here also the Conference had to demand the elementary rights of teachers to avail themselves of school funds for making this type of educational material.

We are grateful to Mrs. Choksi for having come all the way from Bombay to address the Conference on Educational Broadcasts. She gave a comprehensive outline of the subject and also helped in the deliberations of the Conference on the subject, both in the plenary sessions as well as in group discussions. Here, as in other subjects, the elementary need of the schools was to have a radio set and also to have proper arrangements for its maintenance. The Conference, therefore, recommended that the State Governments should provide radio sets in all Secondary schools. Further, so far as educational broadcasts were concerned, the Conference was anxious to see that All India Radio should secure the co-operation of competent teachers in planning broadcasts for children. An interesting recommendation asked the All India Radio to set up a unit for evaluating the potentialities of school broadcasts.

On much-discussed subject of the use of films and filmstrips the Conference made the recommendations which are as commonplace as they are extremely necessary. These essential aids cannot be used as much as is possible or desirable unless the State Governments build up their film and filmstrip libraries, unless the schools have projectors and unless teachers are trained in their use. The Conference stressed the urgent need for fulfilling this three-fold requirement.

The Conference also urged the need to produce suitable films for teaching Hindi to the non-Hindi speaking people in India.

The Conference found the field trip an intrinsically interesting and useful educational device rich with many-sided potentialities and, therefore, advised the teachers to give more thought to it. It also requested the Education Departments to help the teachers in exploiting the educational value of field-trips and thus help in building up the personalities of our children in the following ways:—

- (a) By developing youth hostels.
- (b) By preparing directories of community resources.
- (c) By providing other necessary facilities.

As elsewhere, so in India public opinion is deeply concerned with the evil effects of the cinema on the immature minds of children and youth. A gathering of audio-visual educationists could not overlook the subject. The cinema is ubiquitous and the Conference felt that the best defences against the evil effects of cinema are the internal defences built up in the minds of children and youth. It is necessary to build up in their minds equally a liking for good pictures and

an abhorrence for aesthetically weak and socially undesirable pictures. The subject of film appreciation should, therefore, be encouraged at Secondary schools as much as possible. Further, as the school cannot be isolated from the community, it was necessary to raise public taste in the cinema. The Conference felt that this could best be done by the setting up of film societies.

Mr. Chairman, as you will notice, the Conference, while surveying a large part of the field of audio-visual education, has pleaded mainly for elementary facilities for the use of audio-visual aids in school education. That is so because while the educational value of these aids has now been pretty generally recognised, their actual use in schools presents us with a bleak landscape. Audio-Visual Teachers' Conferences ten years hence will perhaps be justified in taking their use for granted and proceed to discuss ways and means to make it more and more effective. But the present Conference knew where it stood and knew that even a long journey has to start with a single step in the right direction. It thus advised teachers and educational authorities to take that first step. This is the first Audio-Visual Conference to have made some needed recommendations to teachers and Governments.

Mr. Chairman, the 73 delegates in the Conference coming from all but a few States in India have worked earnestly and strenuously for the last week to pool their ideas on how, in so far as they were concerned, they could advise the teachers in the country to give a better education to the millions of children in the Indian schools. I have put before you very briefly the result of their efforts. Theirs is a modest achievement; but it is our hope that even this modest effort will go some way in awakening teachers and educational authorities to the great possibilities inherent in the use of audio-visual aids and thereby make a not insignificant contribution to the great educational movement now under way in India—a movement to the growth of which, Sir, you yourself have contributed so largely. In this hope we ask for blessings and for your word of advice to the delegates who are now looking forward to find opportunities when they get back to their work to translate the message of this Conference into terms which the children and youth in this land will appreciate.

APPENDIX 'D'

VALEDICTORY ADDRESS BY K.G. SAIYIDAIN

I welcome this opportunity of addressing the closing session of the All-India Teachers' Conference on Audio-Visual Education. I have gone through some of the papers read at the Conference and am glad to find that they have comprehensively covered the field of audio-visual education. At the time when the idea of convening the Conference was first mooted, I was a little doubtful how much the Conference will be able to do as you know, we generally have a large number of Conferences and Seminars—but it seems that this Conference has justified itself. One of the many useful things done by the Conference has been its successful attempt to win the cooperation of a number of related agencies, such as the Technical Cooperation Mission of America in India, the Central Institute of Education and the State Governments.

As teachers and educationists we are engaged in a tremendous programme of educational development at the level of children as well as adults. The educational challenge that India is facing today, both in regard to quality and quantity, is as great as if not greater, than any country has faced in the past. If this challenge is to be met, it becomes necessary for us to mobilize all possible resources to help in the achievement of our objectives and to make education economic and effective.

There has been in the past, a tendency to rely too much on the spoken word and to a lesser degree on the written word. Long experience has, however, confirmed the view that words by themselves are not a very effective medium in the education of young children and they are, often, in fact, the cause of much confusion and misunderstanding. Words are particularly deceptive when teachers have to deal with the immature minds of children and less educated people, for whom it may not be possible to assimilate or appreciate the sense of difficult expressions without special help. Their vocabulary is limited and no one knows what percentage of words are accepted by them in the same sense in which the teacher has intended them. The process of teaching has, therefore, to be carried on not only through the spoken words, but has also to be supplemented by audio-visual aids which give a concrete form to the word symbols used by the teacher or written in the text books.

These aids have been used, in a somewhat unsystematized manner, in the past also. What is new is the integration, if I may so call it, of an audio-visual approach into the basic texture and plan of education. There is need for the teachers to integrate into their lessons all kinds of aids—modern and traditional, projected and non-projected—and action media such as drama and puppet shows. I hope that trained teachers would be able not only to streamline but also

improvise these media through their own skill. It is important to remember that much of this material can, and should, be improvised through the cooperative effort of teachers and children.

During my visit to some of the schools, I have come across a number of keen teachers who have, what I have called, the audio-visual approach. One of their besetting sins, however, is that they use too many aids with too little artistic sense. They do not show any economy in the display of these aids and little artistic effort in their making. Their walls are plastered with too many ugly drawings and charts which are a burden on the mind of the child and do not sit pleasantly on the eye. The following points should, therefore, be particularly kept in mind in using audio-visual aids :—

1. There should be economy in the display of material.
2. Teachers should make sure whether the audio-visual aids produced are worthy of display. If properly selected these aids would make the classrooms more pleasant places of learning than they are at present.
3. It is not enough to “possess” these aids—what is important is the way of utilising them properly and effectively.

For instance, films shown to students should not be a mere source of entertainment but the question of their effective use as *educational media* should be carefully thought out. Teachers should take the maximum educational advantage of the material used and attempt should be made to integrate it in every day classroom teaching. If they are not properly utilised, the very purpose of teaching is defeated.

I am glad that the Conference has covered the items on its agenda comprehensively and suggest that steps should be taken to put across its recommendations to the thousands of our schools, so that they might be actually implemented and not remain “paper resolutions”.

APPENDIX "E"

TEXT OF THE PAPERS READ AT THE CONFERENCE

AUDIO - VISUAL EDUCATION IN INDIA TODAY

J. N. Sharma

Audio-Visual Education in its present form is a comparatively recent development to which three trends in modern education have contributed. In the first place, there is the general movement to make education a pleasant and at the same time an effective process that will win the whole-hearted cooperation and effort of the child in its own education. Secondly, in the past, traditional methods had largely relied upon the spoken and written word to convey information and ideas; but words are sometimes a deceptive medium because they convey different meaning to different persons. It, therefore, becomes necessary to use aids and illustrations like charts, graphs, pictures, models, etc., to clarify meanings and to present facts objectively. Thirdly, studies in individual differences have shown that some individuals learn better, if not mainly, through concrete audio-visual aids than through verbal symbols.

In India the audio-visual aids movement has been hampered by three factors which are bound up with one another. Firstly, the teachers have not been sufficiently aroused to the value of the audio-visual aids nor adequately trained to use them. Secondly, they do not have access to suitable audio-visual materials because most of the modern aids are expensive and worthwhile films and filmstrips which form the mainstay of these aids are not available in the language of the pupils. Thirdly, the administrative set up to feed the teachers with audio-visual materials, except in one or two places, is in an extremely rudimentary form, if not non-existent.

It is not possible to cite a date on which the audio-visual movement had its inception in India. As a matter of fact, India possesses a heritage of visual arts rich in colour, variety and types. Her architectural monuments, paintings and calligraphy, her folk arts, dramas and dances, have formed the traditional media of mass communication and, in a way, audio-visual education for her people from times immemorial. Yet, in the general system of education, the importance of audio-visual education was not recognised till recently and the use of audio visual aids has come very slowly. It was perhaps in 1920 that the Bombay Government made a beginning by way of acquiring some films and film projectors for the purpose of organising filmshows locally. There was little progress after that till 1942, when the Ministry of Education set up a small film library and acquired some projectors. In 1947, the present Audio-Visual Section was set up as a part of the post-war educational development plan and

films worth a lakh of rupees purchased. The Section deals with policy matters and other questions concerning audio-visual education in the country.

In implementation of the recommendation of the All-India Audio-Visual Educational Conference held in September, 1951, the Government of India set up a National Board for Audio-Visual Education which was to formulate policy for the development of Audio-Visual Education in India and to examine the work done in this field by the Central and State Governments. The Board gives advice on the promotion of facilities for Audio-Visual equipments for class-room teaching, the production of audio-visual aids and the training of experts in audio-visual teachings. The Board has a wide representation on it of educationists, teachers, producers and others interested in the field. In order that the decisions taken by the Board may be adequately implemented on an all-India basis, it recommended at its first meeting that the State Governments should have their own Boards. Some States have already set up such audio-visual boards or committees.

The Central Film Library has been serving educational institutions and cultural organisations all over the country by lending films and filmstrips. The films and filmstrips so far available in the library are mostly foreign—the majority being by British, American and Canadian producers. They are selected by a Preview Committee which keeps in mind the specific needs of educational institutions. At present, the Library contains 2,575, films 1,456 filmstrips, 427 charts and 215 reference books and periodicals on audio-visual education. More than 850 educational institutions and other allied organisations throughout the country have enrolled themselves as members of the Library. The average circulation of films now is 615 per month as compared to 400 per month in 1951. Films and filmstrips are loaned free of charge to members. The Library possesses films in the following categories:—

1. *Educational Films*: There is a large number of films for class-room use and some general informative films useful to social and cultural organisations.

2. *Children's Entertainment Films*: The Library has acquired a few selected full length children's entertainment films. These are mainly acquired from Czechoslovakia, France, and U.S.S.R.

3. *Select Feature Films*: One section of the Library consists of some significant documentaries and outstanding films produced in various countries. The object is to acquire some outstanding film produced in the past as examples of film technique, the growth and achievements of the film art as a social and cultural record of the times and to make them available to research students of cinematography.

The Library has also acquired cinematographic and projection equipment with accessories. Some foreign entertainment and instructional films which the

Ministry considers most suitable, are recommended to State Governments and other organisations for purchase. As it is not possible for each individual organisation to order films directly from firms abroad, the Ministry of Education offer to consolidate the requirements of the State Governments, etc. and place a pooled order.

The State Governments of Bombay and Madras have developed film libraries of their own while other State Governments stock a few films in their Education Departments for the purpose of lending them to educational and the allied institutions. As it is not possible to meet the growing need of educational institutions from existing sources, it is proposed that the Teachers' Training Institutes and Universities should come forward in establishing film and filmstrip libraries of their own to cater to the needs of the surrounding areas. This is in addition to the programme of building up the State Film Libraries.

The Ministry of Education helps the growth of film libraries in the following manner :—

1. Supply of information in regard to the publication of journals on audio-visual education.
2. Distribution of reprints of articles on audio-visual education.
3. Financial assistance up to 50% for setting up of these libraries.

For the purpose of training audio-visual personnel, the Ministry organises seminars and conferences from time to time. The second of such seminars was organised jointly with the Government of Australia in November, 1955 at Lucknow. In addition to 25 Indians, delegates from Burma, Ceylon, Malaya, Singapore, Philippines, Borneo and Pakistan attended this seminar. The present Conference is a further effort to continue the programme. The States of Bombay, Bihar and Punjab have also organised some short term courses and seminars to train their personnel in the field of audio-visual education.

Film Production :

In implementing the recommendations of the National Board for Audio-Visual Education in India, it was decided to set up three units for producing educational films. In 1952, under the First Five-Year Plan, three production units were set up in Bombay under the administrative control of the Ministry of Information and Broadcasting. The actual production programme is handled by the Films Division, but preparation of synopses of films and scrutinizing of the final scripts are some of the responsibilities of the Education Ministry.

For obvious reasons, the Ministry of Education have for some time past been encouraging Indian producers to produce educational films, but so far without any success. One of the reasons the producers are hesitant to take up this

production is that they are not sure of the sale of a sufficient number of prints to cover their production costs. Another reason is the lack of technical projection equipment in schools. This sets up a vicious circle. Producers do not make educational films until more schools possess projectors and schools do not install projectors until suitable Indian films are available. The circle remains intact because, as already stated, the significance of film and filmstrips as an educational technique has not been adequately appreciated by our teachers. For example, even though the filmstrip is cheaper and more useful for instructional purpose in comparison to the film, it is not being utilised in the country to any appreciable extent, as the following figures show :

1954-55	— filmstrips loaned out :	103
1955-56	— -do- :	126

Private producers approach the Ministry for advice on the production of films and refer scripts to it for scrutiny. The States of Bombay and Uttar Pradesh have set up units for the production of films on social education and general interest. Production of filmstrips is being taken up by various organisations and scientific firms.

A majority of films acquired by the Central and State Film Libraries are foreign and are purchased directly or obtained through some exchange programme. The question of acquiring films on exchange on a negative basis was taken up with the National Film Board of Canada and an agreement has been signed. Negotiations on similar lines are now underway with the Czechoslovak State Film Studios.

The Technical Cooperation Mission of America have offered to produce, in cooperation with the Ministry of Education films, filmstrips and charts on educational topics. A film on Basic Education entitled *Education for Life* has already been produced and 16 mm prints of it in Hindi and English versions have been offered to State Governments and some social education centres in India.

The Second Five - Year Plan has gone a step further to place audio-visual education on a sound footing. The scheme under this plan are two-fold : (1) Teachers and Social Education Workers will be given an opportunity of acquiring skill in the handling of audio-visual aids and equipment ; (2) Audio-Visual Equipment like 16 mm film projectors and 35 mm filmstrip projectors etc., will be made accessible to them. With these ends in view, the following schemes have been proposed to be implemented during the Second Five-Year Plan in cooperation with State Governments :—

1. Establishment of Audio-Visual Sections on a State-wise basis.
2. Organisation of training courses for audio-visual personnel at various levels.

3. Establishment of State Audio-Visual Boards where these have not so far been set up.
4. Establishment of State Film Libraries.
- 5. Establishment of Equipment Pools in Districts.
6. Introduction of audio-visual education in teachers' training institutes.

The Audio-Visual Unit at the Centre will develop its activities further by taking up the following new schemes :—

1. Publication of a periodical on audio-visual education.
2. Production of filmstrips etc. and dubbing of foreign films for use in Indian schools.

A brief account may be given here of the progress of Audio-Visual Education in various States.

The Education Departments at Ajmer, Bhopal, Delhi, Madras and Travancore-Cochin have equipped a large number of educational institutions with film and filmstrip projectors and radio-sets. Arranging filmshows in schools and colleges by Mobile Cinema Units, has been a general feature in nearly all States. The filmshows arranged in rural areas are usually linked with social education programme for the improvement of living standards and better cultivation. They are also integrated with classroom teaching in urban schools.

On the recommendations of the National Board for Audio-Visual Education in India, the Bihar Government has established a State Board on similar lines. They are also bringing out a magazine, entitled, 'The Bihar Theatre'. West Bengal, Orrisa and Saurashtra State Governments have spent large sums on purchase of documentary films for their libraries.

In the Punjab, the Government Training College, Jullundur has experimented on, and as a result, prepared in 1953-54 a film projector, a filmstrip projector, a magic lantern and an epidiascope.

The State Governments of Bombay, Bihar and Punjab organised some training courses and seminars.

THE CENTRAL FILM LIBRARY

Nilima Devi

Today the problem is not to discuss the place of audio-visual aids in education. This has long been settled and audio-visual aids are now regarded unquestionably a dynamic force in modern teaching methods. They bring to the classroom a sense of reality ; they enlarge the experience and broaden the outlook of pupils. The problem at the moment is to extend the facilities and benefits of audio-visual aids as widely as possible to teachers and schools. The Audio-Visual Section in the Central Ministry of Education has that as one of its objectives.

The Section had a humble beginning in 1942 as an adjunct to the library of the Central Advisory Board of Education, which has since come to be known as the Central Education Library. Later, an Audio-Visual Committee was set up by the Ministry of Education with the following terms of reference :

- (a) to investigate the use of films and filmstrips in primary and secondary schools, universities and adult education centres ;
- (b) to expand the Central Film Library ; and
- (c) to advise on the purchase of films and filmstrips from abroad.

Growth Pattern of the Library : The Central Film Library is a lending film library. The films and filmstrips in its stock are loaned free of charge to all educational institutions, social welfare organisation and other cultural agencies throughout the country. The types of films acquired by the library cover four categories : (a) Classroom Instructional Films (b) Socio-educational Films, (c) Documentaries and outstanding Feature Films, and (d) Children's Entertainment Films. 16 mm prints of all educational and informative films produced by the Films Division of the Central Ministry of Information and Broadcasting are also acquired for the Library.

At present the library contains 2,575 films, 1,456 filmstrips and 427 charts and posters. So far over 850 educational institutions and allied organisations throughout the country have enrolled themselves as members of the Central Film Library. Average circulation of films today is 615 per month as compared to 400 per month in 1951.

The Library has also a small collection of reference books and subscribes to outstanding periodicals on audio-visual education. The annexure indicates the development of the Central Film Library during 1955-56 as against 1954-55.

Expenditure on the Central Film Library: The Library has acquired film and filmstrips almost on all subjects both from India and abroad. During 1947, Rs. 80,000/- were spent on the purchase of films and filmstrips and Re. 12,000/- for library equipment out of the total grant of over a lakh. The last years' budget expenditure was Rs. 1,30,000/-. This year the Library has been provided with a budget grant of Rs. 1,35,000/-.

Till now the Central Film Library has not given serious thought to the aspect of cooperation with other film libraries of India. In future such co-operation may be desirable on the following pattern :

1. *Inter-library loan:* Modern modes of communication and transportation have made it possible for us to think of the vast sub-continent of India as one single economic unit. It is also possible that we can effectively use the inter-library loan system to enrich all the film libraries in the different regions of India. Through an inter-library loan we could avoid unnecessary expenditure by purchasing only the minimum number of copies of films required in the country. It is also possible that each regional unit may specialize in films of a certain kind which will be made available to other film libraries.

2. *A Union Catalogue:* If this inter-loan system is to be really and fully effective, it will be necessary to have a union-catalogue of collections of various film libraries in India. The Central Film Library will eventually have to take up this work, but it must wait till the States have built up their film libraries sufficiently to make the union catalogue feasible, necessary and profitable.

3. *Advisory Function:* In due course, it will become necessary for the Central Film Library to function also as an advisory body to other States and organisations who may wish to set up film libraries in their own respective areas. In fact we already are poised to assume this function.

The present functions of the Central Film Library may be broadly summed up as follows :—

(a) *Acquisition of films:* Films and filmstrips are generally selected by the staff and by the Librarian from various catalogues received from different producers, distributors, and international organisations. After a tentative selection a preview is arranged. The Preview Committee which has as its members eminent educationists and officials of the Ministry of Education, meets regularly to preview and approve films for purchase. Films and filmstrips are also acquired from foreign Embassies in New Delhi, particularly from the British Information Service, the Czechoslovak Embassy and the Canadian and the Australian High Commissions after preview.

(b) *Classification and Cataloguing*: The Central Film Library classifies films according to the Dewey Decimal System. A descriptive and annotated catalogue of films acquired by the Central Film Library is prepared quarterly. All necessary information relating to films, such as titles, names of producers or distributors, duration, colour, suitability, etc. are furnished. A catalogue of similar nature of filmstrips acquired by the Library is also contemplated.

(c) *Lending System*: An institution possessing a 16 mm. projector may apply in the prescribed application form for membership of the Central Film Library. Recommendation of the State Education Officers/Directors of Public Instruction/Directors of Education and, in case the organisation is not recognised, of some Government office is a necessary pre-requisite for the membership. After enrolment, the member institutions/organisations are supplied with the following materials:—

- (i) A membership card bearing the member's Code Number.
- (ii) A Catalogue of films and filmstrips of the Library.
- (iii) Application forms for the loan of films and filmstrips.
- (vi) A list of instructions to be observed while sending requisitions.

On receipt of the application for loan of films and filmstrips a confirmation letter is sent to the applicant after making necessary entries in the Booking Cards and Action Report Forms. The Booking Card which represents each print of a film, records the date on which a film is despatched, the date of screening and the date it is expected back in the Library. The Action Report Form maintains the information as to whom the films have been loaned and other details regarding loaned films. The films are despatched to the institution a few days before the due date along with a Screening Report Form. The form is to be filled up by the institution while returning the films.

The teachers or the representatives of the local member institutions are invited to preview their own selection, for when a film is previewed by the teachers the receptivity of the students increases perceptibly, because the teacher is then better able to make the best use of the film.

(d) *Checking and repairing*: On return, each film is checked and rewinded. All splices and scratches are examined carefully and breaks are joined. The condition of the film upon examination, is also recorded in the Film Condition Report Card which is maintained by the Library.

The system of operation of the Library as described here works smoothly and successfully in the Central Film Library. If other film libraries so desire, we will always be ready to assist them in building up their methods and procedures. We will even be prepared to train their librarians for short period.

ANNEXTURE

COMPARATIVE STATISTICAL DATA

of the development of the Central Film Library during 1954-55 and 1955-56

Year	Total No. of films	Films added during the year	Total No. of filmstrips	Filmstrips added during the year	Total No. of charts and posters, maps etc.	Charts, posters etc. added during the year	Total No. of books, periodicals and other printed material	Books etc. added during the year	Total No. of Members	Increase in membership during the year	Total No. of films and filmstrips issued,
1954-55	1,785	336	1,200	39	391	89	300	50	730	102	7,179
1955-56	2,575	790	1,456	256	427	39	532	232	850	120	7,388

INTRODUCING EDUCATIONAL FILMS

Shankar Narayan

The educational value of a film depends upon the purpose which the teacher has in mind and the use he makes of the film to achieve that purpose. The theatrical field can evaluate the success of the film by its popular appeal reflected in the box office. But in education the value of a film is not so easily measured. In the theatrical field it is possible to develop production patterns which are reasonably sure of box office success, whereas in education the type of films which can be used successfully are so diverse that producers seeking a simple production formula for educational films find that no such pattern exists. Obviously, a classification of types of educational films is indicated.

The following functional types of films may be differentiated on the basis of the method of presentation of the subject matter of the film. The films selected here are suitable for use in Secondary schools. However, the exact use is determined by the educational goal to be achieved by the teacher. The films are selected for their high technical quality and authenticity which typify educational films.

No. 1

Type : Narrative film.
Title : *Water, Friend or Enemy.*
Producer : Walt Disney Studio.
Other particulars : 11 min.—Colour—Sound—English.

Introduction :

This is a *narrative film* in which the animated cartoon technique is used to give an orderly, continuous account of a series of happenings. Here water narrates its own story.

We need water to live. Water, which can turn deserts into green farmland; comes to us through the soil in wells, rivers, canals, pools and tanks. Dams are built over the rivers to store the water and use it for irrigation. Pumps are erected to supply the water to homes for drinking. These processes are shown in the film by animated cartoons.

We need water to drink and to wash our clothes. For purposes of drinking, the water must be clean and pure. Water is contaminated by man himself. Human waste product is the biggest source of contamination. Contaminated water is the source of sickness and misery. Naturally, drinking water must be protected. Our wells, pools and water pumps must be kept clean and

protected against unhygienic conditions. In the film familiar scenes like living quarters around which waste water is allowed to flow and contaminate the surroundings, are depicted in a graphic manner. In the commentary questions are put to enable the audience to know which are the sources of such contamination and the causes of infection. Further, the precautionary measures to be adopted for healthy living are also suggested by animated diagrams. The film creates an incentive to clean living. In conclusion, the film illustrates by animation that water should be boiled to make it 'safe' for drinking.

Music is used to add to the effectiveness of the presentation. The film illustrates well the extensive variety of patterns which may be employed with the motion picture film to present a narrative.

No. 2

Type : Dramatic film.
 Title : *Julius Caesar*
 Producers : Sydney Productions, England.
 Other particulars : 11 min.—Colour—Sound—English.

Introduction :

This is primarily a theatrical film that can be used in teaching Shakespeare's drama 'Julius Caesar'. The film begins with a sequence showing the highly emotionally charged mob breaking into the streets of Rome following Caesar's murder. The violent unrest of the mob is portrayed dramatically. Even sober citizens are shocked to hear of the murder of Caesar whom they looked upon with reverence. They are excited to find the murderer and to bring him to justice. The eccentric attitude of the turbulent mob is well depicted by some excellent close-ups of individuals and small groups. Then come the spectacular scene of the speeches of Brutus and Antony. A graphic portrayal of the roles played by Brutus and Antony and other personalities responsible for Caesar's murder is effectively brought out in the film.

Although the film closely follows the written play of Shakespeare, the events that occur have been shot and edited so as to entertain a general audience and also to make it suitable for showing in schools in the teaching of the drama. This is a good illustration of the educational dramatic film.

No. 3

Type : Evidential film.
 Title : *Basket-ball for girls.*
 Producers : Coronet.
 Other particulars : 11 mins.—Black and White—Sound—English.

Introduction :

The film provides a record of scientific data and analysis of Basket-ball. The technique of slow-motion photography is employed throughout the film to analyse the actions and movements of the players and to establish a relationship between events which explain the different rules of the game. The slow-motion record of the game is of the greatest use for coaching staff at Universities. The important points that account for a good basket-ball player are very well illustrated. The photography of the game is not less an art than the game itself. The explanations in the commentary contribute greatly to giving the audience a complete knowledge of the game by the audience.

TEACHING SCIENCE WITH FILMS

J. N. Sharma

Teachers of Science have the responsibility to acquaint their students with the material world in which they live and of inculcating in them scientific habits of mind. Science teachers have the opportunity to derive maximum benefit from the use of films, if they adopt a skilful method of teaching. They are accustomed to handling equipment and apparatus and a large number of films are available on scientific topics in almost all the film libraries of India. We have three types of science films available :

- (i) Subject matter films, which can be used in a programme of integrated and effective classroom teaching.
- (ii) Films which illustrate in a limited way the application of scientific principles.
- (iii) Films which deal in broad terms with the applications of scientific inventions.

For regular classroom teaching films in the first category are most suitable and can be safely depended upon.

Preparation for Use of Films in Science :

The teacher should not only understand the many problems involved in an effective use of such films but also must make at the beginning of the school year, some definite and specific preparations for their use. Long-term planning should, of course, never be inflexible, since the modern teacher should allow for the acquisition of new interests by his students.

The teacher should consider the objective of the course and the subject-matter setting in which the film is to be used. Every film should be carefully previewed before it is used. It may be necessary to project a film more than once since the teacher must determine what exactly the film has to contribute and for what purpose it may be used and he has to note those things which are essential for its interpretation and list its major functions. It is better if the apparatus, pictures, charts, photographs, models, bearing on the topic under discussion are also placed in the same room. This will help to create a stimulating atmosphere. They may also contribute to the understanding of the film to be shown.

Students should be made to realise that the approach to the educational film is entirely different from that to entertainment films. The right attitude can be engendered by a continued use of films in the classroom. When the class meets from day to day during their usual teaching periods and pupils see the equipment and apparatus as a normal content of the science room, they are likely to become film-minded and can better appreciate the utility of film for learning science.

Students enjoy learning situations to which they bring some relevant experience or some background of understanding. For this purpose if some distinguished persons in different fields of science are invited to give talks on problems like the use of a museum, arranging excursions for animal and plant collections or a visit to a laboratory, the students will possibly take more interest in their studies. Of the visual aids the film most nearly recreates science in our lives and clarifies scientific principles, especially where movement comes in.

The motion picture may be a means of stimulating students' interest in various fields. Modern emphasis on self-improvement and the wise use of leisure time is an aspect which should not be neglected by science teachers.

Technique for Utilising Films :

In considering particular techniques for the utilisation of films in science, the teacher is confronted by a number of pertinent questions, such as :—

(i) Point of Introduction :

At what point can the film be effectively introduced ? Should it be used as an introduction to the topic ? Should it be shown during the study of the topic ? Should it be used as a summary or review ?

The teacher will have to solve these questions after he has studied the nature of the film and the objectives of the lesson in terms of the curriculum. No uniform practice can be prescribed.

(ii) Discussion During Showing of the Film :

Should the film be discussed while it is being shown? On the whole it would be better to run the picture straight through but if there are certain points which a particular comment would clear up for the students, some discussion during the showing of the film might be valuable. However, these comments should be very aptly and skilfully inserted so that they add to and do not retract from the interest in the film. The skilful teacher, after having made a careful study of film both from the outline and previews, should anticipate and clear up most points outside the student's experience before the film is screened so that no comments at all would be necessary while the film is on.

(iii) The Number of Times the Film Should be Shown :

How many times should the film be shown? Has the repetition of a film any specific value in teaching science? The limitations of the average school programme may make more than one showing impossible. However, with careful preparation only one showing may be sufficient to realise the objectives in view. A second showing may help to fix desired points. It may settle differences of opinion among the students. Since all the pupils do not think alike and will interpret the film in term of their experiences, a second showing may add to the student's understanding, appreciation and enjoyment of certain scientific facts. If a good book can be read more than once and a poem listened to many times, why cannot a motion picture be seen a number of times both for pleasure and profit? Moreover, if the students themselves ask for a second showing it will surely be worthwhile and useful. The fact is that the full significance of every incident portrayed in the film may not be easily grasped at the first showing, since the action is so rapid that the spectator is transported at a very great speed into the activities and processes of the subject.

(iv) Follow-up work :

The distinctive contribution of the film will not be fully realised unless some type of follow-up work is done. A period of discussion should follow each showing when the students may freely and completely express their reactions to the film, link their film experiences with other experiences achieved outside the classroom and discuss any erroneous conception which the film may have corrected.

Questions raised by average students or the teacher during their discussion period should result in many types of activities. Some students may be interested in making charts, illustrations, models etc. for their museum after getting inspiration from the film. Journeys may be made to places of interest. The teacher who starts the year with a meagre equipment may use the interest of his students to build up a collection which would become a permanent asset to

the institution. During the discussion period the teacher should encourage the shy student who has difficulty in explaining himself to participate in the discussion.

Only a Supplementary Aid :

The film is an instructional tool in teaching science, especially because it contributes something to learning which otherwise is unobtainable. However, as a tool for science teaching it is not a method or an end in itself but a supplementary aid. That being so, it should be used only after a clear consideration of the subject matter and the objective of the course. It is not a cure for all teaching ills. It is not self-operating and its use requires much time for preparation if it is to function effectively.

The use of the film *Characteristics of Plants and Animals* will serve as an example of a film in science teaching. It is a film depicting the processes which occur in all living organisms. In other words, the film should provide problem situations to the student to do his own original research. It is also important that the teacher should secure student-participation in the film lesson.

What a Science Film can do :

A science film can depict the following :

(a) It can make explicit methods and processes which are not directly demonstrable. For example, the methods of fighting a forest fire and methods of tapping rubber from a rubber tree.

(b) It can provide such experiences as will contribute to a student's understanding of the scientific subject matter under consideration but which would be unobservable except through the film. For example, the origin of icebergs.

(c) Several observable actions are simplified through animation so as to eliminate irrelevant details, for example, the operation of a gasoline engine.

(d) Unobservable action can be depicted through animation photography for example, the sound-wave phenomena.

(e) Slow-motion photography can depict action which is unobservable because of its extreme rapidity. An example is the movements of the wings of a bird in its forward flight.

(f) Time-lapse photography can depict action which is unobservable because of its slowness, for example, opening of a flower.

Conclusion :

It is evident that all these are the special functions of the film well adapted for presenting the factual subject matter of science, both by bringing the world

into the classroom and by depicting phenomena which, under ordinary circumstances are entirely unobservable. The film thereby serves to bring the abstract into a seemingly concrete form, a great boon to children who are not quick to grasp concepts explained by words alone. Science subject-matter becomes more real before their eyes and abstract word-symbols begin to be associated with more or less tangible referants. For this reason, the film can dispense information and develop concepts in science with a high degree of speed and accuracy, and should be used rigorously for these purposes.

THE EDUCATIONAL USE OF THE FILM AND THE FILMSTRIP

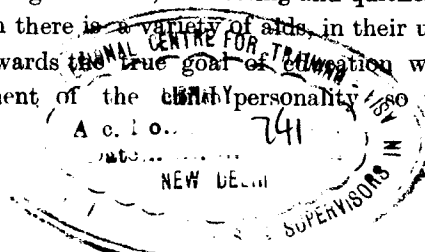
M. V. Krishnaswamy

I would like to start with a few general but basic observations about Audio-Visual aids and Education, before dealing specifically with the educational use of the film and the Filmstrip.

There is a good deal of talk these days about audio-visual aids in education, almost amounting to a belief that these will, or have already, set in a revolution in the field of education. It is discussed, as if it is an altogether new concept of education. This unnecessary and even unhealthy exaggeration of the importance of audio-visual aids springs from a mistake on the part of some who equate the means of education with its end. This is a very serious mistake and we as teachers and educationists must zealously guard ourselves against running into such false and dangerous theories.

Audio Visual Aids Are First and Last Aids :

The use of audio-visual aids in teaching or learning is no revolutionary idea. A child starts his education in life making full use of available audio-visual aids and in the sphere of academic education, teachers too have used such aids as are easily accessible to them. In fact the best teachers are those who make their lessons come alive for their pupils, with examples chosen from the normal environment of the children. This has always been done. Only, in this technological era, such means have expanded, and new and powerful media viz. films, filmstrips, radio, etc. have been added to the battery of aids a teacher could use. We should never forget that these are first and last "AIDS"—instruments for making teaching and learning effective, interesting and quicker. The next thing to remember is that when there is a variety of aids, in their use they must be integrated and canalised towards the true goal of education which is ultimately the all-round development of the child's personality, so that he



can seek self-expression to his best advantage and also grow up as an intelligent, active member of society. New instruments are no doubt good, but with new instruments coming, they must be assigned the function suited to their capacity and with the growth of the variety and power of these new media and means, it is imperative that the person who is to employ them should increase his own capacity, alertness and skill. You know what will happen otherwise. We do not want to be faced with the Frankenstein situation. The genius of man will defeat its own purpose and be destroyed if he is incapable of controlling and using properly the new weapons he is creating ostensibly for the good of humanity—be it nuclear power or audio-visual aids. I put it so strongly for education deals with the minds of men and as the minds of men shape the world we live in, in a matter like this we must exercise utmost care and caution.

You must have marked my saying all the time *Audio-visual aids*. Some talk of Audio-visual Education which I think is highly misleading. Education is a continuous dynamic process, and things like charts, maps, films, filmstrips, radio, etc. are but technical aids to help in the job. Education is the end and these means are justified only to the extent they prove effective. The effective use of the means depends on the teacher and the quality of materials used.

I was recently reading a description of a naval battle and came across this passage which I feel is rather significant and not quite so unrelated to our own problem of the use of audio-visual aids. "The most beautiful machine, the most elaborate devices, were useless if the men who handled them were badly trained or shaken by fear, and there was the interesting point that the more complex the machinery and the more human effort it saved, and the more exactly it performed its functions, the greater need there was for heroes to handle it".

In the final analysis it is the men behind machines who are important. If you will allow me to draw on this military parallel a little more, in the wide range of audio-visual aids at our disposal, we have a battery of weapons devised and perfected by skilful scientists, engineers, artists and technicians but you teachers will be the front line people to put them to maximum use and usefulness. The teachers' responsibility is very great.

Discriminating Use Necessary :

To make education most effective and up-to-date we should review resources from time to time and keep an eye on the development of our own professional skill with regard to aids used. We should think and adopt the right combination of methods and their right use. All Audio-visual aids have their advantages and disadvantages, virtues and limitations from the point of view of technical performance, ability, cost and convenience in their use. We should know, as thoroughly as possible, the comparative value of the various aids in terms of

the factors just mentioned. We must also remember that we use the aids to make children not only learn but think, feel and do. A good teacher must know his pupils well, their background and intelligence. He should have clearly in his mind the aim of his lesson—what it is—is it to promote observation, active use of the senses, evoke feelings of awe, wonder or admiration or nurture thought processes or teach the boys assembling of related facts, their assessment and use? What I am driving at through all these statements is the very important fact that the teacher should take extreme care while using various audio-visual aids that he does not allow either himself or the students to become passive at any stage of the learning-teaching process.

Audio-visual Aids Policy

Before I deal with the use of films and filmstrips in particular, I feel tempted to say a word in passing about the organised use of visual aids at various levels in the Educational programme of the country. I know it is an extremely difficult and complex problem often baffling us as to where to begin—whether with the training of the personnel for the job or the big scale production of the material that would be constantly in demand. The very importance of the subject and its complexity demand a cautious and systematic approach. We cannot afford to be haphazard. Our visual-aids policy with regard to classroom use must be as far as practicable and possible coordinated and integrated at all levels—Primary, Secondary and University levels. At these various levels pilot research projects have to be set up to discover the problems relating to the use of various media, the type of materials that have to be used and, most important, the financial implications of a large-scale programme. Such experiments have to be carried out on a regional basis and by a proper coordination of the results of the regional experiments, a central policy could be worked out. The pilot experimental centres working in collaboration with experienced teachers and educationists should in a systematic way collect opinions regarding the use of different visual aids in schools. Receiving the necessary guidance from the centre—this mainly for uniformity and coordination in approach—they should also conduct research in education through audio-visual media. It is after this basic information is collected that a proper policy with regard to the production of various materials, provisions of apparatus, library of various materials arrangements with regard to the exchange of information could all be planned in a rational way. All this may sound very elaborate and idealistic but I am of the firm opinion that in matters relating to Education, we must be perfectionists. Otherwise, at a later date the entire superstructure may crumble just because the foundations were very, very weak. Therefore, expediency or half way measures do not and must not come into the picture. I know the Ministry of Education is already working on these lines—the organisation of this seminar is itself an instance of a good approach—and it

might be a good opportunity to discuss this aspect of the problem with particular reference to Secondary schools when representatives from all over the country are here.

Film and its Advantages :

To determine and understand the educational use of the film, it is best for us to start with an analysis of the particular qualities that the medium possesses.

The film today has already established itself as a powerful means of communication. The advent of the cinema has given rise to a very important medium for the dissemination of information, news and thought since the coming of the printing press. Originally the film was conceived as an instrument of Research and Education. The Lumiere brothers intensely believed so and it is said that when George Melies who was interested in the medium as a source of entertainment approached them to buy the patent rights, they admonished him that he would be ruined by such a move for this instrument was chiefly designed for scientific research and it would remain so. Not that their prophecy has turned out to be totally true but the educational value of the film medium cannot be gainsaid. Moreover, the cinema is widening its power and scope everyday, with scientists adding new elements and gadgets to its technical repertory.

Let me try and enumerate the particular advantages that the film offers.

Physical Advantages :

1. The fact of its being shown in a dark room compels the attention of the child to the bright moving objects on the screen. We must note, though, that this is not an unmixed advantage. The same performance can be repeated as often as we like. The films can reach mass audiences. The whole class can see what is going on the screen and there will be no difference what one student actually sees and another. There is the possibility of showing the same film at the same time to a group of students in Cape Comorin and Kashmir for any number of copies can be made of a film. It helps us to keep records of the events of the past, the historical past.

2. Now films can present things on the wide screen, in colour and three dimensional perspective. It can also present the world of sound in its full gamut of expressiveness.

3. Foremost among the film's technical advantages is its power to present movement, the representation of motion. I need hardly give examples of these advantages to you.

4. Slow motion and high speed photography enable us to see movement analysed. Things which are normally invisible, as for instance very tiny insects, these can be seen now thanks to cinemicrography. Techniques of photographing

processes taking place in the dark has been made possible by infra-red photography. Abstract ideas can also be represented on the screen by animation—or the cartoon film technique. The mobile camera and the process of editing—helps in a dynamic way to understand the relationship of things, ideas and events.

Caution in the Use of a Film

1. The use of the film in a teaching context, the educational application of a film, to be proper and effective must be strictly related to the advantages mentioned earlier. An ignorance of this principle results in the wrong and gratuitous use of this medium in classroom education. I know that at the present moment such an ideal use of films for academic education is difficult if not impossible. There are not enough truly classroom films produced, it is very expensive to get them specially made, not all schools have projectors, not many schools can afford to invest money on a projector. Plenty of equipment and films will be necessary if we are to integrate the use of the film with the curriculum. We need not grow desperate over the situation and become cynical or pessimistic. Efforts are going on to improve the situation but in the meanwhile the teacher by his initiative and intelligence can do a lot by using available films in a proper way. For a resourceful person everything is grist that comes to the mill. Whatever the film, the teacher should see it carefully and decide what use he is going to make of it. In the hands of an intelligent teacher, even a foreign film can become a useful adjunct for a stimulating lesson. How should a teacher use a film in the classroom? Some educational films carry teaching-notes with them, which make things easy. For other cases, no hard and fast rules can be stipulated. It is for the teacher to decide, taking stock of the ability, and intelligence of his pupils, the purpose of the lesson, the nature of the film, whether he would introduce or explain the film before showing it, or show it and lead a discussion afterwards. It is for the teacher to diagnose the situation and prescribe the proper approach—the number of times he wants to show the film to the children whether he wants to show the film silent or with sound or even whether he wants to try a combination of aids for the same lesson. He may use a film, filmstrip and a chart for teaching the different aspects of the same lesson.

Evaluation of Visual Aids

Evaluation of the results achieved by visual aids and the effects of visual aids on the children from time to time must be undertaken. Evaluation is a scientific and technical job and I feel teachers should be trained in some of the simple techniques of film appraisal and evaluation. Of course I assume that the teacher meant for the job is trained in the materials and mechanism of audio-visual education. The same principles and problems apply to the use of filmstrips too.

Advantages of Filmstrips

I shall conclude my talk with an enumeration of the advantages of filmstrips.

The advantages of filmstrips are that technically they have all the virtues of the old magic lantern slides, plus the added advantage of not being fragile, easy to handle, not bulky to store and most important consideration for us here in India, not very much expensive but convenient and easy to use. Multiple reproduction and distribution is easy. They can be used even with kerosene Projectors. Enterprising teachers could make their own filmstrips. For some of the simple and interesting ways of making different types of filmstrips I would recommend to you the study of the Unesco Publication "Healthy Village" on account of an experiment in the use of visual aids in Education in West China. The experiment is also a good example of the integrated use of different aids. A filmstrip can assist in all the processes involved in good teaching above all—let me emphasise—is in its turn a two-way communication which achieves understanding through discussion, through question and answer, and which involves demonstration, stimulation and repetition.

USE OF FILMS AND FILMSTRIPS

S. N. Shanker Narayan

There is a growing interest in, and discussion of audio-visual education in India. The values of audio-visual aids to instruction have been acclaimed by everyone who has been sufficiently interested to learn what it is all about. The circle of appreciation is rapidly widening. Audio-visual materials have been recognised by our teachers and educationists as indispensable and integral components of instructional materials. Despite this growing interest in audio-visual instruction, in both formal and informal education, it is difficult to say whether we have been developing the proper appreciation for the contributions which audio-visual materials can make and should be making to both the content and method in the educational process.

Audio-visual aids consist of a large variety of materials—projected aids like films, filmstrips, slides and non-projected aids like charts, posters, maps, graphs, pictures, diagrams, gramophone records, tape recordings, radio broadcasts, school museums, journeys and excursions. Teachers are already familiar with the use of charts, posters, maps, graphs, pictures, diagrams which have been in existence for many years as tools of instruction. But the film and the filmstrip are new tools of instruction which have come into existence with the

advent of photography and have increased the possibilities of communication of ideas in a dramatic and appealing manner. In this article I shall discuss the various factors relating to the uses of the educational film and the filmstrip.

Motion Picture Films :

By films, we mean here motion picture films which are produced in the standard 35 mm. size and the substandard 16 mm. size. The 35 mm. film is used almost exclusively by the commercial entertainment theatre. The 16 mm. film has become the standard size for educational motion pictures. It is made from "non-inflammable" acetate of cellulose (called "safety film") as contrasted with the 35 mm. film which is usually made from the less expensive but inflammable nitrate of cellulose. But recently 35 mm. films are also being produced on the non-inflammable acetate base. Both sound and silent 16 mm. films are available in black and white and in colour. Sound films are projected at a speed of 24 frames per second which contrasts with 16 frames per second for silent films. In other words, 24 different pictures from the sound film are projected on the screen every second, giving the illusion of moving pictures. A standard reel of 16 mm. sound film is 400 feet and it will provide a show of 11 minutes.

Filmstrips :

Filmstrips are short strips of 35 mm. perforated safety film containing a sequence of still pictures. The lengths vary depending upon the number of still pictures needed to transmit the message of the filmstrip. The filmstrip is much less expensive than the motion picture and is also more effective for some teaching objectives.

The Educational Film :

It should be emphasised that the word "education" is used here in its broader sense—i.e. "the acquisition of knowledge or skill". It relates to acquisition of knowledge and skill which occurs in school and outside the school in several aspects of everyday life. The term "educational film" refers to the motion picture film in any and all of its uses where it is intended to inform, orient, or motivate its audience to some useful end. In this sense the educational film includes such categories as teaching films, business films, information films, documentary films, religious films, training films, sales films and many more.

The Nature of the Educational Film :

The motion picture film from the broad educational point of view is essentially a multiple method of communication. It is especially effective as a technique of telling a story. It presents facts realistically. It dramatises human relations and events. It arouses emotions. It transmits attitudes. It records and reproduces phenomena for scientific study and analysis. It depicts the

imaginative. And it can enable one to see the unseen. By means of the sound motion picture, the whole gamut of human experience may be communicated from teacher to learner, wherever a learning-teaching situation exists.

From the point of view of life-time learning, the motion picture is not only applicable at all levels of formal education, but it also may be used for the communication of ideas, attitudes and experiences to the masses of people outside the schoolroom. It has proved its effect in adult education, in industry and in sales training. The impact which the motion picture has made upon the public in various countries in the past fifty years is immeasurable. As a method of effective mass communication, the film is unsurpassed. Under the cloak of entertainment, the theatrical cinema has tutored the public to modes, manners and customs. It has also carried its message to all lands. It has developed desires which have had a marked effect upon behaviour. While the philosophical and ethical values which have resulted have been the subject of much debate, the fact is that the motion picture is a powerful tool whether it be used to "entertain" or formally to "teach".

Entertainment and Education :

It has been stated that there is and should be a distinction between the "entertainment" and the "educational" motion picture. The distinction is rather one of use than of content. The motion picture *David Copperfield* was produced to entertain but it is regarded by teachers of English as having great educational value in studying the work of Charles Dickens. The Central Film Library possesses the theatre film *Hindustan Hamara* which not only provides entertainment but also gives glimpses of India's great rulers of the past.

Obviously not all films made for entertainment purposes would be selected by educators for school use. Teachers select films for purposes different from those in the minds of theatrical exhibitors. Just as teachers are careful to select educationally desirable novels and plays for use in teaching literature, so do they evaluate films for classroom use. The demands of education and entertainment are not identical; but a film that is entertaining may be educative as well. And a film which may be highly educational may also have a distinct value when shown in theatres. To classify films rigidly as educational on the one hand and entertaining on the other is not sound.

The point of view expressed above is supported by the fact that as time passes, more and more films which were first produced for theatrical exhibition are being made available for school use in full length or in edited versions.

How then may we define the educational film ?

The educational film is one which contributes to the achievement of desirable educational goals by making effective use of the motion picture as a

medium of communication. This definition emphasises the necessity for (1) a concrete positive contribution through use, and (2) a proper employment of the motion picture medium. The definition further assumes that users of films in educational situations are clear as to the goals which are to be achieved.

Types of Educational Films :

The educative value of a film depends upon the purpose which the teacher has in mind and the use made of the film to achieve that purpose. The types of films which can be used successfully are so diverse that no simple production formula could be laid down. But a classification of educational films could be attempted.

Narrative

The following functional types of films may be differentiated. The first is the *narrative film* which tells a story based on fiction or fact. The narrative film may be animated with cartoons, puppets or models or it may use actors in natural or studio settings. The narrative film informs but it also gives an orderly continuous account of an event or series of happenings. It is a type of educational film which has been in use for children's stories and fairy tales. One example is Walt Disney's film *Water—Friend or Enemy*. Here water tells its own story.

Dramatic

The second type is the *dramatic film* which is primarily theatrical and is used in connection with the study of drama and of literature or for recreational purposes or for the development of discriminating attitudes of theatrical film appreciation. The dramatic film is more highly charged with emotional appeal than the narrative film. Again, the dramatic film was produced at the outset for entertainment purposes whereas most educational films of narrative type were produced with a school or teaching situation in mind. *The Tale of Two Cities* is a good illustration of educational dramatic film.

Discursive

The third type is the *discursive film* which presents a topic or a series of related topics in a logical, systematic and authentic manner. It employs the style of an essay, a textbook or a lecture. The discursive film is informational, for it is generally produced in a typical illustrated lecture pattern. It also gives training in following the reasoning of an orderly presentation. Industry has extensive use of the discursive film to show the processes of modern industry and commerce. These films indicate how goods are produced, manufactured, and distributed. They have been widely used in education. The Encyclopaedia Britannica Productions entitled *South-Western States, Truck Farmer, The Moon*

Electrostatics, Molecular Theory of Matter are illustrations. The discursive film is useful for introducing a topic or a unit to a class, or furnishing background material, or for summarization. The discursive type of educational film when compared to the dramatic or narrative film is dull.

Evidential :

The fourth type is the *evidential film* which is used chiefly to record scientific data for study and analysis. It may also be used to make records of events for co-relation with other data. Extensive use of evidential type of films is now being made in the natural and physical sciences, in the applied sciences and in physical education. Time-lapse and slow-motion photography are employed extensively in making evidential films. For example, the botanist studies the growth and movement of plants by time-lapse photography, the ornithologist studies and analyses the flight of birds by means of slow-motion photography and his findings are applied in designing an aeroplane; the engineer studies the fatigue of metals by means of motion picture; the trained surgeon's delicate operational skill is recorded in slow-motion and is analysed for the purpose of developing better techniques in teaching students. Perhaps the most systematic use of the evidential film to-day is to be found in college football. It is now a standard practice for coaching staff in the large universities to make a slow-motion record of every game. Within two or three days following the game the coaches and players analyse the record to determine the strength and weakness of the play and of the performance of individual players.

In industry and business evidential films are extensively used to study the performance of workers in order to develop the work standards. In fact, the science of time and motion study has been built on ability of the slow-motion picture to furnish the basic data. Training programmes have been developed from the analysis of the performance of skilled workers. In many large industries the value of evidential films is such that the company employs a competent photographic staff and maintains a completely equipped laboratory in order to systematically study and improve techniques and processes. Further examples could be cited from studies made in child psychology, neurology, sociology, ordnance, medicine and many other fields of human endeavour. The evidential film has and will continue to make a large contribution to human knowledge.

Factual :

The fifth type is the *factual film* which treats a topic or series of topics in an encyclopaedic manner for the purpose of conveying information. The factual film differs from the discursive film in that it is an episode or a series of episodes rather than systematic logical treatment of a topic or a series of related topics. Newsreels and many of the travelogues may be classified as factual films. Its purpose is to reveal directly the customs and modes of life of people of various

countries, climes and occupations. It differs from the dramatic films in that it is not primarily based on a narrative story. Some examples are *Microscopic Animal Life, Alaska, Digestion, Beach and Sea Animals, Eskimos* etc. The chief value of the factual film is that it provides direct background information to assist in the study of a unit or topic. Factual films bring in the classroom experiences that could not be gained in any other way except by direct observation through expensive field-trips and laboratory equipment.

Emulative :

The sixth type is the *emulative film* which shows how to perform an act of skill or demonstrate patterns of behaviour which the learner imitates. During the war, this type of film was used to teach trainees how to manipulate apparatus and machines, and how to behave under combat conditions. It was specially helpful in training aeroplane pilots, gunners and technicians. Prior to the war the emulative film had been used to train learners in sports, in first aid, in child-care, in industry and in many fields involving muscular co-ordination. Since the war, a number of films of the emulative type have appeared. The so-called demonstrative films in which the scientist demonstrates a difficult laboratory experiment for the purpose of informing students is not to be confused with the emulative type of film. Rather, it should be classified as a factual film or discursive film depending upon the content or use.

Problematic :

The seventh type, the *problematic film*, sets problems for discussion and supplies the basic data for thinking. The Commission on Human Relations of the Progressive Education Association in the United States produced a number of films of this type prior to the war by extracting problem situations from dramatic feature pictures. During the war the armed services used problematic type films with success. One in particular was employed by the American navy to train pilots who were incapable of carrier duty.

Incentive :

The eighth type is the *incentive film* which motivates action in the direction of developing character, attitudes, morale, and emotional response. The so called "documentary films" would come under this classification. Films which are made to propagandize and to promote sales are of this type also. Incentive films make use of all types of motion picture techniques to provoke the observer to action. The commentary, dialogue, sound-effects and pictures generally move fast and rhythmically combined to stir strong emotional response. In some incentive films the stark reality of the pictures themselves serve to achieve this purpose.

Rhythmic :

The ninth type is the *rhythmic film* which is used to achieve artistic effects and to develop aesthetic responses. An example is Walt Disney's film *Fantasia*. The rhythmic film is characterized by the use of moving patterns of colour, light and shade, geometrical designs and pictorial effects combined with music and other sounds. These films are constructed to appeal to the inborn rhythmical nature of the observer and to his aesthetic sense. Very few rhythmical films have been made. They may be regarded as being in the experimental stage.

Therapeutic :

The tenth type is the *therapeutic film* which is used in medicine in connection with educational rehabilitation of psycho-neurotic patients. These films employ some of the techniques used in the rhythmic type and are also in the experiment stage.

Drill :

The eleventh type is the *drill film* which sets forth repetitive exercises in which the observer participates during the showing of the film. Like the ninth and the tenth types, drill films too, are in the experimental stage. It is to be hoped that more drill films will be produced in the near future, for there are many teaching situations in which they could be applied.

Participative :-

The twelfth type may be designated as the *participative film* which is characterized by the films which have been made for group singing. This type differs from the drill film in that the learning is on an appreciative, rather than on an instructional level. Participative films have been used extensively with theatre audience but have not been employed in schools to an appreciable extent. Participative films can be used effectively in connection with auditorium programmes and in other situations where united group activity is desired.

The twelve types of educational films here listed are offered as a working basis rather than something which is final. In the future there may be other types appearing and there may be many sub-classifications, based on use. Furthermore, these are and will be combinations of types which will make exact classification difficult, unless the educational goals to be achieved in the use of a given film are known.

It is hoped that this analysis of educational films will result in their more intelligent use and in developing more effective production patterns. Clearly a typical incentive film should not be used as a drill film and *vice-versa*. Nor should a factual film be used in teaching dramatic appreciation to a class in English literature. Likewise, a producer would be foolish to produce a narrative

type films when an emulative type is indicated. The discussion of the twelve types of educational films should also serve to give the reader some notion of the broad extent to which films are being used effectively in education at all levels.

Limitations :

At this point one might raise the question, what are the limitations of the motion picture when applied to education ? What is its relation to other audio-visual teaching materials ?

One limitation to the use of the motion picture in education is cost. Good films are expensive to produce and to buy. Projection equipment is expensive ; also, it requires the care of an experienced technician. Additional cost is entailed in properly equipping classrooms for film use. However, despite high initial costs, the school use of films in education is steadily increasing.

A second limitation is that films are perishable and do not withstand wear and tear like many other less expensive teaching materials. Books, slides, models, wall-maps, globes, charts, etc., resist continuous usage much better than films. But all teaching materials need replacement from time to time. Experience shows that given reasonable care the lifespan of films can be increased to compare favourably with other materials.

A third limitation is that teachers often have difficulty in securing a film when it is most needed. Better co-ordinated planning would help prevent many disappointments when teachers order films.

Finally, there are limitations inherent in the nature of the film itself. It moves too fast on the screen for contemplative study, unless projected many times. Learning is the result of one's activity, guided and directed by competent teachers. The film can stimulate activity but unless there is a directed response to the ideas which it communicates, the learning products will not be fruitful.

The well-balanced audio-visual programme in education is characterised by the use of many teaching aids of which the motion picture is one. It is an important member of the audio-visual aids family. Films should not be used to present concepts which are common in everyday experience nor those which could be taught with inexpensive materials such as models, wall charts or objects. The combination of films with slides in which the latter are employed for follow up discussion and to review salient points appear to possess possibilities worthy of serious experimentation.

Audio-visual teaching materials of all type have their advantages and disadvantages. Each has contribution to make in the improvement of educational methodology. However, it is clear that of all the modern educational tools, the motion picture possess as qualities which rank it along with the printing press

as one of man's great achievements in developing methods of mass communication. Harnessed to the problems of world education, the motion picture could, in the sober thought of many, lay the foundation of human understanding so essential to world peace.

Problems of Selection.

An effective educational film should present ideas and information which are best understood in motion. It should present the information better than it can be presented by a book, slide, chart or lecture. Otherwise, the time and money spent on the making of the film are wasted.

Many of the produced materials are open to question because they do not make a contribution to the subject area, are above and beyond some of the traditionally well used methods of presentation, or do not refer to sources of subject information currently in use. Any teacher who is interested in previewing, evaluating, and finally selecting supplementary informational material, (in this case in 16 mm. film form) must ask this important question: "Is this material valid instructional material which I should consider useful and necessary to establishing understanding in my subject?"; and "Does this film present this information in a way which is more efficient than methods which I am currently using?" If not, the material is obviously of little use because it may only duplicate what is already being accomplished. If the film contains useful, acceptable informational material, and does present it in a way which is an improvement on what the teacher ordinarily does, then obviously the film material is essential. Further, a film should be incorporated as a supplementary learning experience in the course of study or in the classroom method plan. A good film is one where little can be added or taken away without diminishing the effect. Other points of consideration are good sound track and balanced photography.

Presentation :

The responsibilities which a teacher should feel for the presentation of a new subject source of information via the sound film are as follows :

1. The stage, must be set ; anticipation for the new learning experience must be heightened and interest must be awakened. The introduction of the film should be made by a person who has had an opportunity to preview the film and to study the film guide. The teacher should speak for a few minutes to introduce the film and to acquaint the audience with the nature of the programme. The teacher can relate anecdotal information close to the subject under study. Difficulties in the vocabulary of the commentary may also be explained.
2. Then comes the actual screening of the film.
3. Discussion may follow immediately. It is only through discussion that

the able teacher can detect the degree to which information has been assimilated by the pupils. The discussion can be stimulated by referring to the essential points suggested in the introductory statement.

4. As follow-up activities, oral or written composition may be planned.

The sound film is to be thought of as a teaching supplement which will add realistic, clear-cut, well-organised and graphically presented background information to the learner-background information which will increase the learner's understanding of the subject area he is investigating.

Filmstrips :

A filmstrip is a most inexpensive medium of mass communication yet devised for providing teaching pictures at a smaller unit cost than any other medium. It consists of a strip of film made of cellulose acetate (non-inflammable) film 3.5 mm., slightly over an inch wide and varying in length from two to five feet. It is usually contained in a metal container or a cardboard box. The pictures begin after a short length of blank leader which is provided at both ends of the filmstrip to facilitate threading into the projector. These pictures are all related to one topic and are organised in a definite order. The commonly used single-frame size is generally about one inch across and $\frac{3}{4}$ inch high. The proportion is the same as in the motion pictures screens and standard lantern slides. The single frame filmstrip is run through the projector vertically. It is also possible to print the filmstrip with the frames running horizontally instead of vertically in what is referred to as the double frame process. In this case each picture frame is about one inch high and $1\frac{1}{2}$ inches wide.

There are sound and silent filmstrips. Sound filmstrips are now produced with accompanying gramophone records. Silent filmstrips are shown and discussed by the teacher. Both silent and sound filmstrips are supplied generally with lecture notes. The teacher can, however, prepare his own guide containing the appropriate information.

Criteria for selection :

1. The most important factor is to decide first exactly what part of the subject matter should be prepared by filmstrip medium. Of course, since filmstrips have not been produced on all topics it may be that none exists on the particular subject for which such treatment is desired. But, there is little point in using a filmstrip to emphasize an obscure or minute point merely because a strip is available on the topic. It is therefore, desirable to select a strip to fit the need of the situation. Once the subject matter area is chosen, it is well to know for what purpose the strip is desired, i.e. for review, for introduction of a unit, for discussion, for direct teaching, for demonstration, for illustration or any other purpose that the user may have in mind.

2. The following points would be borne in mind during the actual selection. Does the vocabulary used in the copy suit the age level of the group to which it is to be presented? Is the approach and treatment suitable for the group? A too elementary vocabulary or a too juvenile approach or device can just be as undesirable as difficult vocabulary and advanced treatment.

3. If approach, treatment and tone are appropriate for the audience and the purpose in mind, it is then good to consider the visualization employed. Do the photographs, drawings, diagrams and other pictorial material in the filmstrip really visualize the subject? Do they add something to the understanding that words cannot supply as effectively? Do the pictures themselves "speak" to the audience? The pictorial treatment should also make use of the close-up, the medium shot and the long shot to the best advantage.

4. The organisation of the material in the filmstrip is also of importance. A good filmstrip has the facts and ideas organised in logical sequence that is easy to follow, moving smoothly from one thought to the next. A haphazard collection of pictorial material and text that jumps from one topic to another and then returns again to the first topic in both distracting and confusing, leaving no vivid impression with the audience. This need for clarity of organisation is easily recognized in filmstrips desired for direct teaching or review, or discussion, or for demonstrations.

5. The problem of the amount of text contained in a filmstrip is probably dependent to a large extent upon not only subject matter and the purpose for which it is desired, but also to some extent at least upon the individual user's preference. However, if the filmstrip is to be a visual aid, undoubtedly the pictorial matter should carry the major portion of information. There is also the "superimposed caption" versus the "text only frame". Both have their uses, and many good strips employ both. If caption is definitely related to the picture, it probably should appear on the same frame so that the two will be presented together for greatest effectiveness.

6. Of course, the technical quality of the filmstrip also has a bearing on its effectiveness as a teaching aid. The photography should be good and in proper focus so that all lines are sharply defined, and properly exposed.

7. Naturally, the information presented in the filmstrip must be accurate and there should be freedom from bias or distortion of facts. If there are two valid sides to a question the ideal filmstrip should present both. However, a one-sided treatment can be useful in stimulating discussion of both sides if it is made clear prior to the screening that the filmstrip does not present the whole story.

Using the filmstrip :

General directions for the classroom use of filmstrips include the following instructions :

1. Preview the filmstrip and prepare the lesson.
2. Present the filmstrip.
3. Follow-up the showing.
4. Show the filmstrip again, if necessary.

These four steps may be given as simply as above or may be elaborated by the addition of the details as given below :—

Preparation :

1. *Lesson.*
 - (a) Select the filmstrip.
 - (b) Preview the filmstrip.
 - (c) Study the accompanying manual or guide.
 - (d) Prepare introductory remarks.
 - (e) Plan entire lesson.
2. *Class.*
 - (a) Introduce the filmstrip.
 - (b) Arouse interest in the filmstrip.

Presentation :

1. Pre-test.
2. First Showing.
3. Post-test.
4. Discussion.
5. Application.
6. Additional showings if needed.

Application :

1. Contribution to lesson explained or discussed.
2. Practical application.
3. Learning activities.
4. Relation to next lesson.

The experienced teacher may not go through some of the details consciously, but never-the-less the "stages of instruction" (from preparation by the instructor, through presentation application and examination, to follow up or discussion) should always be respected. The preview of the filmstrip, for instance, can be compared with the need of the teacher's acquaintance with any materials—maps, models, laboratory equipment, the textbook, reference books, and any thing also being used for instruction. Since this is true, it is readily apparent that there is no special trick for using the filmstrips in teaching ; it is used in exactly the same manner in which the effective teacher uses any material.

Student Participation :

Perhaps the greatest benefit can be derived from the filmstrip if maximum active student participation is gained. One approach to such participation is by allowing class members to do the projection and to attend to all details concerning the physical set up of the classroom for showings. The filmstrip projector is so simple that even pupils at the elementary school level can operate it. Arranging the classroom can also be simple enough for these pupils to do. They can set up the projector and screen before classtime, with the strip to be shown threaded and properly focussed. They can darken the room at the proper time, provide adequate ventilation, and re-arrange the seats if this is necessary. The student in charge of the projection will necessarily be alert and listening to any accompanying remarks of the lecturer, so that he will know when to change the picture on the screen.- Others will be attentive if only to check the ability of their classmate as projectionist.

Some More Hints for Teachers :

The filmstrip should be one which has definite value in relation to the topic of the lesson in which it is to be used. Not only the teacher, but also the class should understand this relationship. Therefore, the strip should be properly introduced and its purpose explained. For example, if a teacher wishes to use a filmstrip for illustration of examples showing applications of a scientific principle, the class should be reminded of the principle and told why examples are being shown. The introduction should include clear direction as to what the group should look for in the filmstrip and what the teacher wants them to get from it. In brief the content of an introduction can be stated thus :

1. What the filmstrip is about and how it is related to the topic being studied.
2. Why it is being shown.
3. What the class should derive from it.

A good short introduction helps to rouse the interest in the filmstrip and gain attention for its content.

Class questions and discussion should be encouraged during the actual showing of the filmstrip. If the students do not understand the information as presented in any single frame or in a sequence or want additional information, his questions could be answered at the time when it arises in the student's mind and while the frame of the filmstrip is on the screen. It is one of the advantages of the filmstrip medium that each frame can be held in view as long as desired. Class discussion on any point in the filmstrip can be developed at any time during the showing. Often the projected material arouses interest in specific topic that might be lost, at least, to some degree if discussion is postponed until after the showing. The teacher can also encourage discussion with his own questions, if the students do not spontaneously desire to discuss or amplify a particular topic.

The follow-up of the filmstrip can take many forms, depending upon the subject matter, the purpose for which it was used, and type of filmstrip. Tests or short quizzes on the content of the filmstrip itself are one part of the follow up, and may be given in either oral or written form. Sometimes it is desirable to present questions which may be written on the blackboard and answered during the discussion. A filmstrip demonstrating a skill such as the use of the slide rule can be well followed by the assignments of problems for solution by class.

When the filmstrips that have been designed specifically to accompany a certain text-book are available, the correlation of the text-book and the filmstrips should assist in the learning process.

The filmstrip, too, like all teaching materials, should be used together with other aids and tools. For example, written or drawn material of many kinds can be placed on the blackboard for use in conjunction with a filmstrip or as its follow up. Related outline maps, graphs, or problems on the blackboard can be referred to whenever appropriate during the screening. A filmstrip produced for use with a specific film can of course be used for the review of the film. It may also be used prior to the screening of a film to help the class to find in the film those points which they should particularly note. It may be used as a focus for the follow-up discussion. The competent teacher will always make the requisite adaptation of the methods suggested above in order to achieve his objective.

INTRODUCING DOCUMENTARIES

H. S. Bhola

Before screening the two documentaries this evening, I would like to make some introductory remarks. The Documentary is a great social invention in the field of motion pictures. Its educational potentialities are immense and it can play a vital role in the life of the community. In Canada, for example, documentaries have provided a regular supplementary system of national education.

The Documentary is the film of social analysis. It is a creative interpretation, in social terms of the life of the people as it actually is. That is what distinguishes it from a newsreel. A newsreel or a magazine takes natural material but its observation is journalistic. It only describes without dramatizing or exposing or revealing. The Documentary also takes natural material but its observation is creative. It does not only describe but also analyses and interprets.

By describing men and women with sympathy and by highlighting their contribution to the whole scheme of things it makes feel significant, and the monotony of their existence is made bearable for them. It is thus an art with a social purpose.

We will see two documentaries this evening: Flaherty's *Nanook of the North* and Grierson's *Drifters*. *Nanook of the North* is in the romantic tradition of documentary but *Drifters* with its scenes of wild nature and billows of the seas partakes of the drama of the smoke chimney and the doorstep.

Let's see what Grierson, the father of the documentary, has said about Flaherty's *Nanook* :

"Flaherty adopted one gambit with *Nanook of the North*. By profession an explorer with a long and deep knowledge of the Eskimos, he had the idea of making a story about people he knew—not foisting, studio fashion, a preconceived story on a background for the decorative quality it added, but making his story from within. *Nanook of the North* took the theme of hunger and the fight for food and built its drama from the actual event, and, as it turned out, from actual hunger. The blizzards were real and the gestures of human exhaustion came from the life. Many years before, Ponting had made his famous picture of the Scott expedition to the South Pole with just such material; but here the sketch came to life and the journalistic survey turned to drama. Flaherty's theory that the camera has an affection for the spontaneous and the traditional and all that time has worn smooth, stands the test of more than twenty years, and *Nanook*, of all the films that I have seen—I wish I could say the same for

my own—is least dated today. The bubble is in it and it is, plain to see, a true bubble. This film, which had to find its finance from a fur company and was turned down by every renter on Broadway, has outlived them all.”

Paul Rotha, another great name in the field of documentary describes the social significance of *Nanook* in these words :

“Not merely did it reveal the daily struggle for life maintained by the Eskimo people, but it demonstrated that the progress of civilisation depends upon Man’s growing ability to make Nature serve a purpose, and by his own skill to bend natural resources to his own ends.”

Grierson’s *Drifters*, I will also introduce with excerpts from Paul Rotha. “In the *Drifters* is Grierson’s only personally directed film, it has come to be regarded as being more important than it actually is, or was, for that matter, intended to be. Made on a shoestring (Creighton has most of the money for production), with little previous practical experience, it humbly brought to the screen the labour of the North Sea herring catch from such an approach that the ordinary person was made to realize, probably for the first time, that a herring on his plate was no mere accepted thing but the result of other men’s physical toil and possibly courage. It ‘brought alive’ (an E.M.B. phrase) not just the routine of the catch but the whole drama of emotional value that underlay the task, interpreting in its stride the unconscious beauty of physical labour in the face of work done for a livelihood. Moreover, there was brought to the conception all the poetic qualities of ships, sea and weather. In other words, Grierson took a simple theme (there for the taking), took actually existing material (there for the shooting), and built a dramatised film by interpreting the relationships of his theme and material in the sphere of daily existence.

“Leaving style and technique apart, *Drifters* laid the foundation for documentary in this country. May be it lacked a full expression of social purpose. Power of production limited that. But it was inspired by a greater aim than mere description or superficial observation. It was inspired by a sincere understanding of the labour of man and the poetry of the sea. Beyond that, it served, and served well, a purpose beyond itself.”

"L'ATALANTE"—an Introduction

P. D. Khera

A sound film is not only a simple combination of visual and aural aids but it is a new medium in itself. Although a mixture of sight and sound, the visual aspect plays a dominating role in the sound film and sound helps to interpret visual impression with the help of overtones. You will today see the French film *L'Atalante* directed by Jean Vigo in 1933, which is an example of film using theme songs dramatically.

L'Atalante is the most advanced and mature of Jean Vigo's films. It tells the story of a young skipper of a barge on the Seine who brings his wife to live on the ship *L'Atalante*. It gives glimpses of the life on the barge. She gets tired of the lonely, dock confined life as compared to open city life and pines for the life of Paris. A momentary quarrel and she runs away into the city. The separated couple yearn for each other. At this point the climax becomes surrealist in treatment. During this period she loses her purse. The sequence depicting the loss, catching the thief and her mental condition at that moment has been brought out with excellent effects. The film also gives an idea of the social conditions of the period. The couple is eventually brought together again by the grotesque half-mad ship's mate. The music is enchanting throughout and it grows in intensity as the separated lovers dream-of-each-other as though they were searching eternally in a vast sea, swimming under the water.

The beauty of the film lies in the equality imparted to it by the Director, Vigo. As the story is told it is full of symbols and images, yet there is a sense of documentary realism in it.

HAND-MADE FILMSTRIP

DIRECT ART WORK ON 35 MM. FILMS

Shankar Narayan

Techniques :

- (i) Pen drawing on clear film.
- (ii) Brush painting on clear film.
- (iii) Etching on clear film.
- (iv) Etching on black film.
- (v) Combination of the above techniques.

Colour originals

- (i) Colour on clear film.
- (ii) Etching and colour on clear film.
- (iii) Ink drawing and colour on clear film.
- (iv) Etching and colour on black film.

Materials required :

- (i) 35. mm motion picture film—1000 ft. No. 3 Eastman Motion Picture Safety leader 35 mm with Bell and Howell perforation. The film comes in either clear transparent film with no emulsion on it or coated with a heavy black emulsion.
- (ii) Etching Table.
- (iii) Drawing pins.
- (iv) Needle fixed to a piece of wood for etching.
- (v) Knife for scraping-
- (vi) Indian ink, pen and brush.
- (vii) Transparent colours (Kodak's "Velox" or Johnson Tinting Colour).

Working principle :

The pictures are made on both the black and clear film by the following two basic methods :

- (i) Applying ink, paint or colour to film with pen or brush (drawing and painting).

- (ii) Removing the black photographic emulsion (also ink, paint or colour applied to the film) with a Stylus, knife or other sharp implement (etching and scraping). Cross combinations of these methods produce a further variety of mixed techniques.

BLACK BOARD AND BULLETIN BOARD

J. L. Azad

Need of Audio-visual Aids :

The conservative teacher who has been clinging hard to his old creed and teaching methods inspite of all the efforts to popularise and encourage the use of audio-visual aid does not regard even till now, these aids as anything more than mere fads and frills in education. Little does he realise that nearly 85% of the knowledge that any individual possesses is gained through the sense of sight. Again, the child comes to us possessing both the gifts of 'hearing' and 'seeing' and if both are properly utilised by the teacher, the process of learning is quickened. In this world of terrific speed and quick actions. It only stands to reason to expect that the educational machinery would be so geared up that the fruits of education are made available to the children as speedily and attractively as possible. ~~This can be possible only if the children are saved from the~~ stranglehold of verbalism and adopt such educational methods as make a judicious use of sense of hearing as well as sight and it is here that the visual aids like the black board and the bulletin board have a special role to play. Before discussing the techniques of using the black board and the bulletin board, it would be well to trace the causes of the very little use made in our schools. To my mind they are as follows :

Firstly, audio-visual aids have generally been identified merely with motion pictures and rightly or wrongly motion pictures as such do not find favour with the orthodox in the profession, who with all piety, consider them evils incarnate. Secondly, most of the audio-visual aids require a certain amount of investment, and pre-planning on our part and it may be because of mental lethargy, lack of finances or lack of encouragement from the education authorities but the fact remains that the average Indian teacher is averse to inviting unnecessary work and adding to his troubles.

Thirdly, there is lack of knowledge regarding the proper handling of audio-visual aids.

The purpose of this Seminar is to create widespread opinion in favour of audio-visual aids and to convince the teacher that by recognising the place of

these aids in the domain of education, he will not have to teach the additional subject of audio-visual aids but that they will only be making use of the 'seeing experience' of the child and thus enabling him to grasp the subject matter more fully and more conveniently.

Black Board as a Visual Aid :

The black board is the first of all visual aids. Though it is not possible for one chronologically to trace its origin and development and describe the various changes that it has undergone it is believed that black boards are modifications of horn books of Middle ages. This is certain that the crude forms of the black board namely the sand, board and slate existed much earlier than pictures, drawings, graphs, models, maps, charts or any other visual aid. The black board today is as much a part of school as the desks, registers and other important paraphernalia. The problem, today, is not to convince the teacher about its necessity but to induce him to make a more frequent use of it and, still more, is to tell him how to use it intelligently and properly.

Uses of Black Board :

It is a lamentable fact of our system of Teachers' Education that although the black board continues to be the *Sine-qua-non* of our educational process, the students in our Teacher Education Institutions do not attain as much mastery in its technique as for example, a student of Physics attains in the use of Science apparatus. The black board is the cheapest and most potent teaching device in the hands of the teacher and each trainee at the very outset should be told about its importance and given practice in its use on modern lines. Now-a-days when the number in classes has risen considerably and when individual attention has given place to group teaching the importance of black board has increased considerably :

- (1) It helps the teacher to focus the attention of his students on the lesson.
- (2) Black Board writing and drawings intensify pupils' interest in class work.
- (3) A versatile teacher can use it in varied forms. Any time he likes he can erase it and start, as they usually say, 'on a clean slate'.
- (4) It eliminates or at least less chances of spelling mistakes which occur in dictation.
- (5) A Black Board summary will wind up in a nice way even a dry lesson and will ensure proper grasp of the lesson by the pupil.
- (6) And last and the interesting use is that it can be used as a screen for projection of pictures.

Technique of Using a Black Board :

A black board can fulfil the expectations enumerated above only if it is used properly and a proper use is possible only if a thorough practice is given to the teachers right at the start of their careers. The following suggestions in the use of the black board would be helpful.

(1) While writing on the black board, the teacher should not turn his back to the class, otherwise he will not only hinder the visibility of the material but also increase the chances of indiscipline in the class. An unwary teacher may even get a few paper balls on his back from some naughty pupils.

(2) The teacher should remember that he is writing for children who are about 10 to 30 feet away from him and he should write distinctly.

(3) A novice may experience trouble in keeping horizontal and vertical lines in writing. Sometimes while writing beginners make an unpleasant sound with the chalk which often disturbs the proper atmosphere and make the students wonder away from the lesson and indulge in unpleasant laughter. In drawing work too beginners draw an ellipse when they have to draw a circle and vice-versa. All these things need practice and if teacher trainees take this period of black board writing more seriously, they will overcome these difficulties before entering the portals of schools.

(4) One of the principal difficulties in the use of black board is that of writing with chalk. It may sometimes be all right to see some white sparkling chalk dust in your black moustaches, but it is not a happy spectacle to see a teacher with his hands and face besmeared with chalk dust. The black board must be erased carefully and to be sure, the dust from chalk when it goes into the throat does not add to the quantity of calcium in ones' body and serve as a tonic, but causes a bad throat and skin irritations.

(5) Coloured chalk pieces may be used to illustrate various part of a diagram.

(6) Use of a pointer is desirable in explaining material written on the Black Board.

(7) As Sumner puts it, "The clue to all Black Board work is boldness and simplicity". The black Board should not be overloaded with too much material. It should be thoroughly cleaned before anything new is written on it and with the chalk at an angle of 45° in his hand the teacher should allow his hand to move freely on the Board. While writing or lettering, the following precautions must be observed :—

(a) Letters must be full, well formed, uniform and well spaced. (b) They should be of sufficient size so that even the students at the farthest desk can read it. (c) The lines formed should be parallel to the Board. (d) Words must be spelt correctly. (e) They should have a neat and orderly appearance.

Quality of Black Board

Before we conclude our discussion on this subject, it is essential to consider briefly the size and quality of black board, because I find that due con-

sideration is given to the age of pupils while supplying them with desks etc. but very rarely with various age groups is any serious thought given to the size, kind, and quality of a black board. If in the first primary class you supply a black board in length and breadth equal to the height of the class teacher, assuming the teacher is 6 feet tall, a major part of the board will remain unused during the period. Similarly, the amount of work to be done on the black-board must be taken into account while providing a board for the class. It is not necessary that the black board should always be fixed in the wall. Sometimes you may have a folding black board, sometimes one mounted on an easel but whatever kind it is, its surface should not 'shine'. It should be painted with good black paint. Experiments are being done to find the surface which will give the maximum relief to pupils. It is believed that green is a soothing colour and therefore a 'green black board might prove better black board ; but in this connection we have to wait and see before giving a final verdict. In fact whatever the type of black board we may use in distinct or foreseeable future the fact remains that the effectiveness of a teachers' work can always be judged by going into his class and having a look at the black board he uses.

Bulletin Board :

No progressive school can afford to be without a bulletin board. It may well be termed as the index of the extent and direction of schools advancement. It is really very sad that very few schools possess a bulletin board. Sadder still is the fact that wherever it exists, it is not found at a conspicuous place but is generally concealed in some dark and dim corner of the school. Worst of all is the fact that wherever these drawbacks are absent it is very seldom used and more often than not simply to convey news to students. It has not been realised that a bulletin board can be used effectively to inform students to motivate them into useful educational activity, to bring out their latent potentialities and arouse and retain pupils' interest in school work. If a school cannot afford to have a bulletin board, a black board may be used for the purpose, or even a wire may be used for the purpose on which reading material can be suspended, but the best material for a bulletin board is the Cork or wood with Billiard cloth on it which does not show tacks. An artistically designed frame can run all around and a piece of glass may be fixed into the frame. If desired a lock can be put on the frame. It is desirable to have more than one bulletin board for the whole school and one for each class and a students' committee may be appointed to look after its maintenance. This committee should work under the guidance of a teacher.

Use of Bulletin Board :

Bulletin board should always be located at a well lighted place and easily accessible to pupils and it should be mounted at a height which corresponds to

the eye-level of pupils. The following considerations should be borne in mind in this connection :—

1. Space should be provided for various subjects dealt with under interesting heads like. "Do you know your country", "Facts you should know". One may give geographical information to students under the head "Who is who", You may give new details regarding important men and events under the head "What is happening around you". You may similarly deal with scientific topics.

2. An educational project can be dealt with easily on one half of a bulletin board. For example the project at hand is "Progress of Railways in India". On the first day, the name of the topics together with relevant books on the subjects may be given on the bulletin board, Then as the students find out details, these may be exhibited on the bulletin board. This will provide an incentive to all pupils to make their contribution as there is a strong urge not only in pupils but in all concerned to see that the attention of pupils is focussed on what they have written.

(3) There are certain things which have an interest for the day only and these must be removed from the bulletin board at the end of the day, likewise a thing should not be allowed to remain on a bulletin board after it has outlived its utility. The papers, diagrams, maps and posters etc. which are removed from the bulletin board should be maintained in a file.

(4) Results of sport events, new projects undertaken individually and collectively and other items which interest the pupils should always be put on the bulletin board. Breaking of such news to pupils by sending notices in teaching periods should be discouraged as it is only then that students will approach the bulletin board with new hopes and interests.

* (5) Punishments which are to be made public and achievements of individual pupil and that of the school may be advertised on the bulletin board.

(6) New arrival in the library may be exhibited on the bulletin board.

When all is said about the uses of the bulletin board, the fact remains that the popularity of a school bulletin board will to a large extent depend on the fact that material should be pasted or pinned on it artistically, there should be no overcrowding of the material, due space should be given to all school curricular and co-curricular activities, general appearance of the board should be attractive, and the contributions of students which have variety, originalities, and comprehensiveness should be given priority.

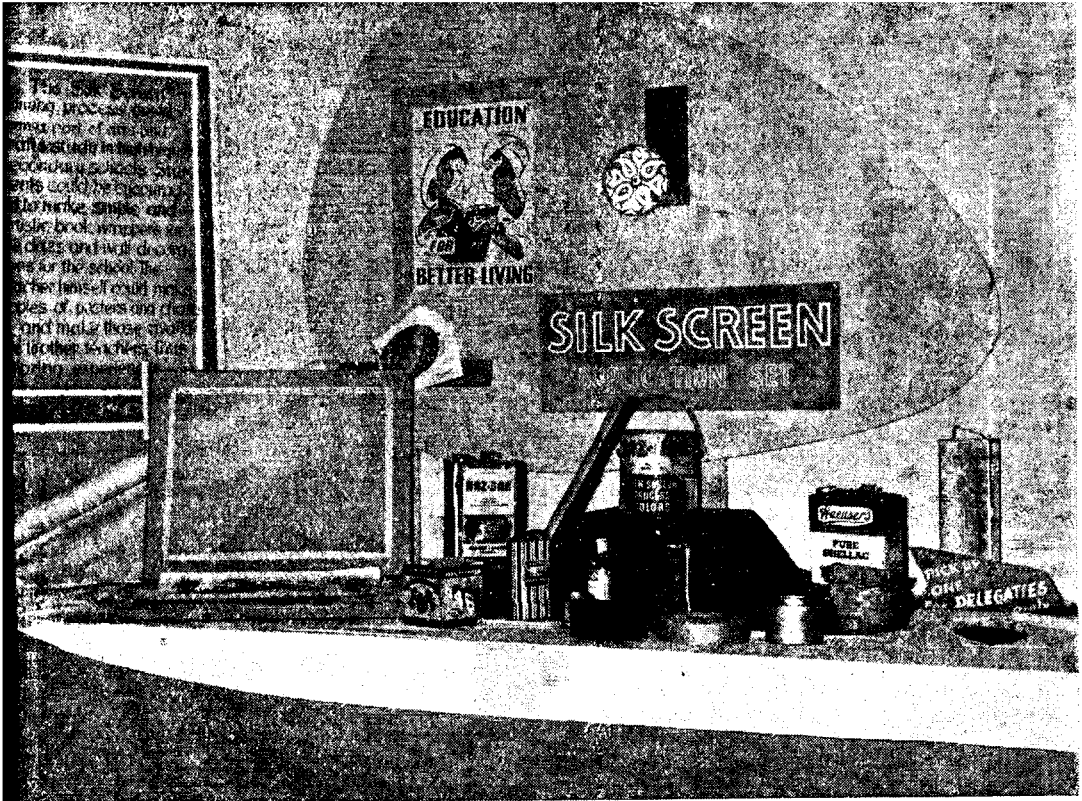
*A section of the Conference was strongly of the opinion that punishment should not be publicized in this manner.



A Bulletin Board display at the Audio - Visual Exhibition.

Diorama, a three dimensional non - projected teaching aid.





THE BLACK BOARD AND BULLETIN BOARDS.

J. N. Sharma.

The oldest of old friends in visual aids is the black board or to give it more up-to-date name-the chalk-board. We may adopt the use of newer and newer educational devices but we should not ignore the importance and utility of the black boards and the bulletin boards in education.

Some schools do not have motion picture projectors, some do not have even filmstrip projectors but it is rare for school to be without a black board. Today black boards are as much a part of the school equipment as desks, chairs, tables etc.

Types of Black Boards.

In the past, different types of materials have been used in black board construction. The most commonly used material has been wood, painted and stained black. Slate has also been quite commonly used in this country but its expensiveness and the difficulty of getting sheets of sufficiently large and suitable size have prevented its wider use. Cement mixture containing black pigment has also been tried, but it is not found satisfactory because it absorbs moisture and consequently the chalk does not mark evenly or easily on it. The board should be constructed with the convenience of students in mind. The size of the board also varies from class to class, for example, a primary classroom black board should be 28" from the floor, in the secondary schools 32" and 3' from the floor in High School classes. Roller type boards are increasing in popularity. Maintenance and up-keep costs of these boards are much higher than for the usual type of black boards. As such they are not very much in use, still their utility in campaigns in rural areas cannot be overlooked. There is yet another kind of black board which is revolving in nature and is most commonly used in colleges and universities.

Purposes Served by Black Board.

The black board came into use at a time when modern duplicating devices were unknown. Through the use of the black board the teacher could reproduce materials which an entire classroom could see at one time. The material could be erased and new material written. No expense was involved except for the original cost and an insignificant sum for chalks. Briefly, it serves the following purposes :

1. Reproduction of material, including material not found in the class text, e.g. that made out by the teacher himself.
2. Presentation of new facts, words, rule and definitions etc.
3. Illustration for the purpose of clarification e.g. diagrams, sketches etc.
4. Display of examination and test question.
5. Showing actual construction of different diagrams.
6. Space for decorative and creative work.
7. Teaching accountancy and other book keeping subjects in which the teacher has to write all statistical accounts and other mathematical calculations during the class period. It is, however, wasteful to take time for this during a class period and it should best be done before the actual period begins. The use of coloured chalk to show differentiation of the various parts will add to the effectiveness in teaching a subject like Biology.
8. The black board is very useful in teaching shorthand where the movement and direction of the stroke can easily be explained.
9. With the use of black board, the teacher can illustrate his lesson and at the same time call attention to important points in it.
10. Reviewing the whole lesson for the benefit of the student.

At the same time the black board has its own limitations. These are :—

1. The writing on it is often not visible from all corners of the room.
2. Dropping erasers and pointer or chalk pieces sometime causes unpleasantness in the class.
3. Errors made unconsciously by the teacher may be stamped on the students' minds.
4. Dust from chalk and duster may cause throat and skin irritation.

Correct Use of Black Board.

The following rules for using the black board will increase its effectiveness as a visual aid :

1. Do not crowd the board.
2. Be brief. Concise statements are more effective than lengthy ones. Sometimes it is important for the student to have a copy of the written material on the black board. In that case it should be cyclostyled and distributed beforehand.

3. Plan the black board ahead and keep the lay out in your teaching plan folder.
4. Use colour for emphasis.
5. Print all captions and drawings in block letters.
6. Erase all unrelated material as it only serves to distract attention.
7. During the presentation of the subject, accent the position at the right moment and under-line statements which require special attention.
8. The teacher should always stand on one side of the black board and use a pointer.

The Bulletin Board.

Every class should be equipped with a bulletin board. A good bulletin board is an educational tool useful for arousing interest in the student, developing efficiency and following up black board work. The teaching value of a bulletin board lies in the following :—

1. It serves as a place for displaying outstanding work done by the pupils.
2. Provides a suitable place for the display of clippings, news, pictures, posters, photographs and similar other material.
3. Creates interest—it is not uncommon to find a number of students around an interesting bulletin board before and after the class.
4. Acts as an agency for socialization through group efforts in arranging displays and collecting material for the displays.
5. Furnishes an outlet for artistic and creative abilities of the students.
6. Keeps the atmosphere of the class cheerful.
7. Provides information (through booklets and brochures displayed) on some specific topic.
8. Provides a place to put up students' progress records.

How to Use Bulletin Boards:

1. Collect suitable illustrations for instructional projects and problems.
2. Classify and file material for the bulletin board beforehand.
3. Arrange the material on the bulletin board in an interesting manner.
4. Prepare a title and give brief description.
5. Use colour harmony.

6. Encourage the students to observe and contribute to the bulletin board. A student's interest may be aroused by simply placing his name on the bulletin board.
7. Stand on one side of the bulletin board whenever something is to be explained with the help of a pointer.

The students themselves can do a lot in the preparation of a bulletin board. Assign some specific subject and provide data for the purpose. Simultaneously give a few points on the use of bulletin board and let the students proceed to express themselves. You will be amazed to see some original and creative display.

The bulletin board should be put up at a well-chosen place in the classroom. It should be in a well-lighted space and at a height corresponding to the eye-level of the students. If the bulletin board is of a general nature it should be placed at the entrance of the hall.

The above pertains to the fixed or permanent bulletin board. There are movable bulletin boards and some boards can be used on both sides. There are suspended and folding boards as well.

General Care and Utilization of the Bulletin Board.

Attention is invited to the following points :—

1. The material should be selected with care.
2. The material put up on the boards should be correlated with the regular class activity.
3. The bulletin board should be a feature for the school or class of which the student should be proud.
4. The material on the bulletin board should be changed frequently. It must be timely. Some displays are valuable for a day, others for two days, a week or perhaps longer. Each bulletin board have a definite plan and be based on the following important factors :—

I. General Appearance.

- a) Arrangement.
- b) Variety of material.
- c) Appeal.
- d) Authentic illustrations,
- e) Neatness.

- f) Originality.
- g) Explanation.
- h) Levels and printings.

II. Educational Value.

- a) Clearness of purpose.
- b) Appropriateness.
- c) Timeliness.
- d) Stimulation.

MAGNETIC BLACK BOARD

H. J. Moos

The most elastic and practical varieties of mobile pictures are the flannel-graph and the magnetic black board. The principle in both cases is that movable objects are made to adhere temporarily to a background.

Magnetic Black Board :

In the case of the magnetic black board the background consists of a sheet of mild steel painted black and the illustrative material is fixed to small half-penny shaped magnets. Problems such as traffic and road safety could be shown with the help of a magnetic black board. Various techniques like cricket, hockey, net-ball etc. could also be very effectively demonstrated with the help of a magnetic black board.

The magnetic black board makes the point more clear and illustrates exactly the point, no more and no less. It is cheap and portable. Its greatest advantage is that it is aesthetically agreeable and essentially stimulating.

THE BLACK BOARD AS A VISUAL AID

P. K. Roy

The black board or, more correctly, the chalk board is the only tool which has been appreciated since the time of Comenius in 1658 by all and sundry—the rich and the poor, the teacher and the taught alike.

The merit of a blackboard over other visual aids lies in the fact that it helps in the development of the lesson without causing interruptions. The use of projectors in instruction is possible after darkening the classroom, generally at the end of a particular lesson. But the black board can be used throughout the development of a lesson from the introductory part to its recapitulatory part. Motivational questions on the black board at once draw the attention of the class towards the subject. A competent teacher of Geography would prefer to draw an outline map of India on the blackboard and ask the class to shade the area receiving the highest amount of rainfall from the southwest Monsoon by putting a question like: "Which parts of India get the heaviest rainfall in summer?"

The most important part of the lesson is the exposition stage. The black board should be used here judiciously for clarifying abstract statements. By means of pictures, sketches, diagrams and all types of graphs, vague statements can be given a concrete form.

In the last stage of the lesson i.e. the recapitulation stage, the black board helps to summarise a few important points, which fix the lessons in the minds of the children.

Constant use of the black board by the teacher in exemplifying the theoretical statements adds to the efficiency of a teacher. Students not only gain sound knowledge of the subject but develop a regard, a soft corner and a genuine love for the teacher. The personality of the teacher, which is a powerful factor in developing the personalities of his students fails to influence in modern sound motion pictures, which unfold and illustrate truth and theories mechanically—the living voice of a man being under the control of a machine. A sound motion picture once released goes on at its own uniform speed without taking heed of varying capacities and rates of grasp of students. But a black board presentation by the teacher helps precocious, normal and backward children with equal sympathy.

Simple as well as complicated sketches, diagrams and maps, etc. encourage the learners in drawing and map making. Frequent preparation of maps and sketches on the black board by the teacher removes the false fear of students.

Regarding the use of the black board a very important question arises—the question of artistic ability. Not every teacher is endowed with all the special abilities and so he or she faces some difficulty in making free-hand maps and diagrams on the black board in a limited time. To overcome this difficulty several devices and methods have been suggested by Walter Arno Wittich and Charles Francis Schuller in 'Audio Visual Materials—Their Nature and Use.' They are as follows :—

I. *The Template Method* :—For drawing outlines of different continents, countries and states etc. cut out respective patterns in the light template sheets, heavy card boards or plywood. Hold the desired template with your hand against the black board, and draw the outline with a chalk-stick. This is a very quick method for drawing the outlines not only of land masses but of other objects also. Templates once cut out, if preserved well can last for a very long time.

II. *The Projection Method* :—This is a novel and interesting method. Required outlines of maps, diagrams, and sketches are prepared on a small scale on a sheet of paper—and then by means of opaque projectors—episcopes and epidiascopes the materials are focussed on the chalk board surface in the desired size and dimension. The outlines and other characteristics of the projected pattern may then be traced in any colour and in any detail.

III. *The Grid Method* :—This method is within the grasp of almost every teacher, and is neither expensive nor difficult. In this method the teacher draws small squares say of $\frac{1}{2}$ " size on the original illustration to be enlarged or drawn on the black board. After that the teacher duplicates the original marked off figure and then transfers the same in an enlarged form on the board.

IV. *The Pattern Method* :—The punch or pounce system is the more appropriate word for this method. In this method the outline of the map is traced on a heavy tracing paper. Then with a leather worker's punch $\frac{1}{8}$ or $\frac{3}{10}$ inch in diameter the whole outline is perforated at approximately a one inch interval or closer. Placing the punched outline against a clean black board the dusty eraser should be rubbed firmly across the perforated section of the outline. Thus an outline in detached dots appears on the black board which the teacher can easily join by continuous line.

V. *The Hidden Drawing Method* :—As the name suggests, in this technique the series of sequential diagrams, which are needed for a systematic development of the lesson are drawn in advance on the black board a black curtain resembling the colour of the board can be hung over the board to keep the previously drawn figures hidden. As the lesson proceeds and the need arises, diagrams can be exposed one after the other just by drawing aside the required portion of the curtain. This technique saves time and hides the limitation of the teacher as well.

To sum up, it is not an exaggeration to say that the black board not only accelerates the processes of teaching and learning but that no other elaborate method can take the place of a 'chalk talk' done well. It assists the pupils to witness what they receive through the ear. Thus aural and visual sensations get connected and together they smoothen the process of learning.

USING POSTERS AND CHARTS IN THE CLASSROOM

John B. Wilson

I have been asked to talk to you about the use of posters and charts in the classroom. I will talk first about the use of posters. In order to discuss posters, let us agree on what is a poster. We are all familiar with advertising posters, billboards and advertising signs. In fact, the poster derives from signs and signboards.

Posters :

The most important single thing to remember about a poster is that it should demonstrate vividly and clearly one single idea at a glance. For the purposes of this talk, I shall designate as a poster any piece of teaching material that meets this qualification: a picture with words that puts across one idea in a single glance. I will discuss charts, graphs and similar graphic material later.

Let us begin by examining a poster. When you judge posters, or when you plan to make your own, there are four main principles to consider :

- (a) brevity ;
- (b) idea (that is, the pictorial presentation of the idea to be conveyed) ;
- (c) simplicity of layout ;
- (d) efficient use of color.

Classroom Use of Posters :

How are posters used in the classroom ? One primary function of the poster in classroom use is to assist the teacher in motivation. This is the primary purpose in commercial use of the poster, and it remains a primary objective in the classroom. The poster can be used to motivate the student, to arouse his curiosity and interest in the subject of study. A good example is the use of foreign travel posters to stimulate interest in the study of geography to interest the student in the customs, costumes and characteristics of the peoples of other countries—in the physical geography of those countries.

A second effective purpose for the use of posters in the classroom is as a reminder. For instance, by the time a child has reached secondary school, he knows that personal cleanliness is important—but as teachers know very well, the knowledge alone is seldom enough. There is a need for frequent and varied methods of reminding the student, so that he will put his knowledge into regular practice, until lifetime health habits are formed. One way of accomplishing this is by the use of health posters effectively located and changed often.

A third function is to establish atmosphere. Teachers of foreign languages, for instance, frequently find that the use of good posters, as well as pictures and paintings, helps in creating a feeling for, and an atmosphere of, the country whose language is being studied.

Fourth, the preparation of posters by students develops their own creative potential. A student making his own poster can give free play to what he has learned. For example, a student in English literature preparing posters for a Shakespearean play must demonstrate his understanding of the basic idea of the play. In the social studies, such problems as playground safety, personal hygiene, street and road safety and other parts of the current school programme can be highlighted and emphasized by having students prepare and use posters. Their creation and display becomes an effective means of implementing the students' study.

A fifth use of the poster is in connection with class activities for athletic contests, election campaigns for student groups, music and dancing festivals, and hobby shows.

Methods of Using Posters :

If you are planning to use posters in direct connection with teaching lessons, the following suggestions may be helpful: Check through the teaching plan and select the topics and subjects which can be presented most effectively by use of a pertinent poster. Select and prepare the posters that will clarify the subject. Always remember that a poster should have just one single idea—it should tell the whole story at one glance.

In the classroom, posters may be used to introduce the subject, to present the subject, or to review the subject. In classroom use, the following points may be helpful:

- (a) Display the poster on an easel, or in some other conspicuous place in the front of the class.
- (b) One way to secure attention is to spotlight the poster. (The light from a slide or opaque projector will serve this purpose.) As the students enter the class, they cannot help noticing the poster.

- (c) Explain the purpose of the poster.
- (d) Turn off the spotlight after using the poster.

The advantage of this method is that your students are introduced to your subject before your class is actually begun.

The majority of teaching posters are used to present the steps in a topic. You should have a separate poster for each step you are introducing. I would suggest that you correlate the posters with other visual aids: the black board, photographs, slides, models, actual objects, or any other teaching aid that will help you to clarify the lesson.

Again, for review, before closing the class, the subject or lesson may be reviewed by spotlighting the poster and briefly summarising the idea to the students. Another review method especially adaptable to short unit programmes is to lay out a space on a bulletin board or a wall for posters based on each session. As each problem is completed, the poster is put in its proper place. At the completion of the programme, the complete set of posters is reviewed.

Sources -

Resourceful teachers already know many sources for securing posters in teaching their classes. Many times postcard requests addressed to manufacturers, or to tourist bureaus, travel agencies and to Government departments, both State and Union, will bring you posters and charts dealing with specific subjects that fit into your lessons.

Making posters :

We should remember, however, that the best posters are home-made. A good home-made poster should be :

- (a) Directly related to the specific topic. This is the chief reason for making your own posters.
- (b) Clear and forceful. There should be no doubt about the message the poster conveys.
- (c) Illustrated with pictures that tell the story. Titles and brief captions will help clarify meaning.
- (d) Well designed. The layout of the poster has a great deal to do with its effectiveness. It should center on one dominant job task. A forceful poster is plain, simple and direct.
- (e) Colourful. Colour attracts attention. When used intelligently, it is one of the best methods of focussing attention on an important point. Use bold, vivid colours to obtain striking effects.

The size of the poster will depend upon the size of the classroom. Large posters 44 by 28 inches and small ones 28 by 22 inches will usually do for most classrooms.

Ordinary brown wrapping paper, the backs of old posters even newspapers, construction paper, and fiber boards will provide suitable background material. However, a sign card or show cardboard will prove to be most satisfactory. A thick sheet of cardboard 44 by 28 inches may be purchased for about a rupee.

Remember, your titles must attract attention; keep your captions *brief*. The title should be clearly visible to your entire class. If you are printing, the letters should be clear and at least two inches high. Avoid lengthy captions. A good title is brief, but tells the story.

As for the contents of the home-made poster, this will depend on your own originality. Pictures, photographs, charts, graphs, maps, diagrams, lines, arrows, circles and *actual objects* may be used. When models, specimens, or other objects are used, they may be attached to the poster with staples, tape, needle and thread or paste.

Poster-making by Pupils :

Pupil-made posters have much to commend them, both from the standpoint of experience for the student and communication to the other students. Psychologically, the child is primarily interested in his immediate surroundings. One of the principles of education is that we must start instruction at the point which the child has reached—and go on from there. This principle means further that effective instruction makes use of natural interests wherever practicable and develops new experiences on the familiar foundations of the old.

Actually, construction of a good poster is not difficult. Out-puts can be used effectively. Primary pupils can begin poster-making in connection with their first school experiences. They may begin creating simple decorative designs and progress into more complex drawings. Then comes the use of a pair of scissors and paste to make cut-outs from newspapers and magazines. Attractive posters can be made from coloured paper cut-outs in simple forms by younger children and more complicated forms by the secondary students. As muscular coordination increases and imagination develops, the art of the student poster begins to show understanding of the principles of colour, design and balance—it begins to convey the message effectively.

Lettering is one of the most difficult parts of poster-making. Letters may be cut from newspapers by the younger children and older ones may cut letters from squares of folded paper. Free hand lettering is attractive but more difficult. Letters should be clearly separated and proportioned. Remember, bad

lettering can spoil an otherwise splendid piece of work. The principles of poster-making are simple and easy to learn and may be found in any good audio-visual text book.

Charts and Graphs

Now let us discuss charts and graphs. Charts and graphs show information in lists, pictures, tables and diagrams. They help us to teach quantity, development, function and relationships of factors. Charts need not be built on definite mathematical principles, but graphs generally are. There is no real need to separate this type of teaching aid into distinct hard and fast categories. A teaching device that is called a diagram may also be termed a chart, a graph, or even a map under certain circumstances. Charts are not new to classrooms; for many generations they have been used to teach reading and writing—ABC charts in the West and Literacy Charts in the East. The following list and definitions may be useful :

- (a) Development or Progress chart (frequency graph) ;
- (b) Pictorial chart ;
- (c) Table chart (such as railroad, bus, airline schedules) ;
- (d) Genealogical or Tree-chart (used to show dynasties, cause and effect) ;
- (e) Flow chart (to explain government, economics, industry, etc.).

Diagrams :

Diagrams are simplified drawings which show inter-relationships, primarily by means of lines or symbols. It should be even more highly simplified than the chart, showing only the most essential elements. It may be more difficult to read than a chart and there is, therefore, a need for careful planning in using diagrams with your classes.

While charts are highly condensed visual summaries of facts and ideas, diagrams are even more condensed and rely heavily on symbolic means of representing ideas. In order to be effective, both must concentrate on key ideas and dispense with unessential details. Understanding information or ideas presented in diagrammatic form usually requires a background of first hand experience. Most of us are unable to comprehend a schematic diagram of a television receiver because we lack the knowledge necessary to interpret it. What does this suggest with reference to the use of diagrammatic materials in teaching? First of all, it means that before using a diagram with a class, the teacher must make sure that his pupils have the necessary background to understand it.

Research in Effectiveness :

Little research has been done on the ability of children to read diagrammatic materials, A series of four studies by Malter with elementary school

pupils has revealed that most children of elementary-school age have considerable difficulty in reading cross sections, process diagrams, and conventionalized diagrammatic symbols, such as diagrams of a gasoline engine and lift pump. A follow-up study reveals that the addition of clarifying materials such as photographs of the actual object aided the children greatly in reading a cross section. A second follow-up study showed that when simple directions such as "Start Here and Follow Arrows" were added to a process diagram of a flour mill, the children were materially helped in interpreting the diagram correctly, although there was evidence of a need for still further improvement in it.

Malter's studies support the principle that *diagrams and similar materials of an abstract character require careful foundation work before they can be used efficiently with a class of pupils*. It follows that diagrammatic materials usually lend themselves better to summary and review than to introductory use in lesson. As teachers know, the interpretation of even such relatively concrete media as pictures depends heavily on the experience which the child can bring to a picture. A diagram of the steps in flour processing will have much additional meaning after the pupil has had an opportunity of going through a flour mill, seeing pictures of the several operations involved, and perhaps seeing a sound film describing the complete process.

Coordinated use of Audio-Visual Materials :

A second principle is that other appropriate audio visual materials should be used with charts and diagrams to make them more understandable. Such materials as pictures, slides, film strips, and motion picture films all have as their basic function the clarification of significant concepts. While each audio-visual medium has certain unique advantages in a specific instance, the coordinated use of several types of audio-visual materials will yield the best results in most teaching situations. This is particularly true in the case of charts and diagrams because of their high degree of abstraction.

Graphs :

Line graphs are the most abstract as well as the most mathematically correct of all graphs. They are derived by mathematical formulae involving the function of two variables. A system of coordinates is arranged with marked points, values or magnitudes so that definite mathematical values can easily be located and charted.

Graphs have the advantage of visual simplicity. They consist of a simple series of vertical or horizontal bars, beginning at a base or zero line. The bar graph pictures relative amounts, such as inches of yearly rainfall, production of steel; or similar statistical data. It is easy to make and easy to read.

The circle graph or pie chart is simple and effective. It is widely used to show relative proportions. For clarity, it may be shaded, cross-hatched or coloured. Pictograms may be inserted.

Pictorial charts, or pictograms, are the most popular and the easiest for most of us to understand. Children, in particular, prefer pictorial graphs, in which bars, lines, curves, and shaded areas are replaced by conventionalized drawings of the data. Rows of locomotives, steel rails, workmen, and so on, are realistic, easy to understand and easy to remember.

How do we use these graphs in the classroom? Teachers of the lower grades will find simple graphs helpful in arithmetic, social studies, language, and other classes.

Some teachers use simple charts to show how many and what books their students have read. Coloured strips of paper may be pasted on the charts to show which books have been read. Nearly every geography or history textbook makes elaborate use of graphs. When you use charts and graphs in your teaching, be sure that they are simple and easy to understand,

Graphs give vivid pictures of comparative values, but they can also be deceptive. Statistics can be used to prove almost anything—and this is true of graphs, since they are merely an effective way of presenting statistics. The conscientious teacher stresses truthfulness and accuracy in preparing graphs and charts for classroom use. Be sure to be accurate in preparing the graphs you use in teaching,

Very good charts can be made by teachers and by pupils. Simple and effective charts can be prepared easily and without great artistic skill. Anyone who can draw a straight line with a yardstick and use a pair of scissors can, by following a few simple suggestions, make charts and diagrams that will help present key ideas. Many teachers have found it valuable to have some pupils plan and make graphic reports in place of writing a term paper.

Suggested Procedure :

1. Lay out a plan for the chart on a sheet of paper $8\frac{1}{2}'' \times 11''$ or smaller.
2. Keep the chart simple; remember that chart presents one idea or comparison. When it becomes intricate or complicated, it loses effectiveness. It should convey an impression at a glance.
3. Make the chart large enough to be seen easily. A chart for classroom use should be large enough to be read from any point in the room,
4. Make it attractive. Use contrast colour, and plenty of space.

5. Achieve contrast by using dark letters and figures on a light background or light letters on a dark background. Be sure that the important things stand out.

6. Use colour when suitable. Even though colour pleases the eye, do not overdo it. Keep the colours harmonious.

7. Remember that space is highly important. Leave plenty of space—at least equal to the filled-in space on the chart, and preferably more; keep the margins generous.

8. When your plan is complete, sketch it lightly in pencil on the chart and complete it. An opaque projector is valuable in transferring your small sketch to a larger surface.

Materials:

1. Gummed or cardboard letters and numbers are available in all sizes and types. Inexpensive sets provide several sizes of letters and figures in adequate quantities.

2. For bars, lines, etc., black or coloured tape is both easy to use and inexpensive. Coloured cellophane tape can be bought in a stationary store, and coloured paper tape $7/8$ " wide in art supply stores. The latter can be secured for a nominal sum in red, green, blue, brown, black and white in rolls of 10 yards. Rolls of black gummed tape in widths ranging from $1/8$ " to 1", and various gummed symbols such as arrows, circles, stars, and ovals can be purchased from local art supply stores.

3. Lettering pens, India ink, and drawing ink in various colors are good for outlines or straight lines. Speedball pens in several sizes can be purchased from a stationary store for a few cents per point. Better for extended lines are payzant freehand lettering pens, available in stationary stores in various sizes. The pen of size 100 draws a $3/16$ " line, the pen of size 0 a $1/8$ " line, the pen of size 2 a $1/16$ " line, etc.

4. Cornell board or other light-surfaced building boards are good for a base. Cornell board can be purchased in sheets 4'x8' and cut to desired sizes. Large sheets should be braced or framed to avoid warping. Bristol board, a 10- or 14- ply cardboard, is suitable for smaller charts and does not require bracing. It may be obtained from stationary, art supply, or school supply houses in white or colours in sheets up to 30"x40" at moderate cost. Various other materials can also be used.

How to Use Graphs in your Teaching. The more abstract teaching materials are, the more experience pupils need in order to learn from them. Pictures convey meaning readily because they usually contain many elements already familiar to the student. Graphs, on the other hand, are principally symbolic

and abstract in character ; hence they are best used in the body and summary of a lesson after the student has acquired a background of information from other sources.

Children should learn about graphs in arithmetic in the early grades. They learn how to make them and how to read them. They see graphs in newspapers, magazines and textbooks. Graphic material is not completely foreign to a child's experience. Pictorial graphs in particular are readily grasped by upper-grade or older pupils.

The graph is by nature a summarising device. It visualizes totals and the relationships between totals over a period of time. It expresses certain quantitative conclusions about a particular subject, such as immigration during a certain period, or comparisons of production, etc.

The good teacher rarely begins a lesson with conclusions because that would be to apply the principles of deductive reasoning. Most teachers find that learning is more efficient and productive when it proceeds from factual information to the application of facts ; and then to the principles or generalization that arise from many such applications.

Somewhere between these extremes of the learning process are the necessary summaries which can best be presented by graphs. After studying about farming in Europe, the U.S.A., Russia, Indonesia and India, the pupil is ready to interpret a series of graphs comparing rice, wheat or cotton production in the different parts of the world. Before this, he could probably read the graph, but it would have little meaning for him except as isolated factual information. When the experience gained through the study of books, pictures, films, and other media, the student can bring a type of comprehension to the graph which would have been impossible at an earlier stage of learning.

That is why no single teaching aid is complete in itself. That is why the effective teacher uses every type of teaching device that will simplify, that will clarify, in short, that makes the learning process by making the information easier to understand.

POSTERS AND CHARTS

H. S. Bhola

Of the various audio-visual aids in use today the poster and the chart are of special significance to us in India for the reason that we can afford them. Our educational budgets may not for some time to come provide for the supply of radio-sets and film projectors to all schools and we may not find money immediately to set up well-stocked regional libraries of films and filmstrips in the country. But charts and posters are inexpensive and available—available often free of cost from such sources as business firms, travel agencies, trade and commerce houses, museums, libraries, exhibitions, theatres, government offices. What is more, such material can be made by the teacher himself in the class room.

It is useful to dwell further on the question of production of visual material like posters and charts by the teacher in the school. When good commercially produced material is available, the teacher had better save his valuable time and invest it in some more profitable occupation. But when it is not available, the teacher can produce his own posters and charts. This has certain advantages. It can be easily integrated with the lesson and it will not be as “standardized” as a commercial chart or poster would be.

Teachers can produce posters :

Not all teachers are good artists. But they can always draw diagrams and sketches with the help of stencils. They can cut fine silhouettes and can easily perfect the technique of stick-drawings after an honest and persistent effort of some weeks. They can, as a last resort, lift illustrations from newspapers, hand-bills, advertisement notices, and magazines and use them for their own posters and charts. Captions, too, need not be written in freehand. Stencils can be used or the captions can also be assembled from the newspaper headlines. And we must never forget that every high and higher secondary school has a drawing master on its staff. You can do much with his help.

The special relevance of such material to our conditions have been recognized by the Ministry of Education and they have set up a separate unit for the production of non-projected visual aids, like posters and charts. The Unit will welcome good and original material developed by teachers in various schools in India for standardization and possible production on a mass scale so that significant teacher-experiences may be profitably shared by others. The teachers's training institutes in the country have already been approached by the Ministry.

How to Use Charts and Posters :

Posters and charts are not new things and most of the teachers here may have had several years' experience of actually handling them. We will, therefore, do well to recapitulate here some points concerning their use. I will do it very briefly,

Posters are picturised slogans. They are not elaborate but dramatic and dynamic. They are meant to hammer a message home. The poster may teach a specific item, a general idea, or may create an environmental effect generally or immediately related to the curriculum. Its message is short as 'Drink More Milk', 'Keep Your School Clean', etc., and its appeal is instantaneous.

Charts are more elaborate. Maps, graphs, diagrams, sketches, cartoons are also forms of charts. Technically they are classified as: tabular charts, genealogical charts, flow charts, comparison and contrast charts, progress charts and guidance charts. A chart is a graphic design which explains rather than represents. That is why a chart should be used together with the original. A chart may summarise, compare, contrast, or sum up. It may be a process, a relationship or a flow of events. All this would suggest to the teacher the various teaching situations in which charts can be profitably used.

The following points may be made as regards their selection and utilization : (1) A chart should not say too much ; (2) it should not be too ornamental or too crowded with words ; (3) it should be of the proper size and lettering should be bold and legible ; (4) it should be hung at a suitable height parallel to the eye-level of the students ; and, (5) of course, it should be suitably integrated with the lesson.

There are many things a chart or a poster may not be able to do, but there are many more it can do remarkably well.

SILK SCREEN PRINTING OF CLASSROOM VISUAL AIDS

David W. Morris

Last Monday Mr. Wilson talked to you about the use of posters and charts in classrooms. As he pointed out, large posters find many uses in the classroom.

Today I have been asked to explain and demonstrate the Silk Screen Printing method for the production of posters and charts and for the preparation of many other items which you will find valuable in your teaching work. For example, book jackets can be designed and printed by this method. Wall decorations or background scenery for dramas which involve repetition of particular designs can be produced.

Advantages of Silk-screen Printing :

One of the advantages of Silk Screen printing is that the equipment necessary to produce large-size display posters costs only about 50 Rupees, while other methods run to several thousand.

Speed is another advantage. Large visuals can be produced in a matter of hours whereas methods involving letterpress or offset printing require time for detailed layouts, and for photo-mechanical work in commercial printing houses. This is both costly and time consuming when one considers the short runs that are usually made for school purposes. More often than not a good idea is discarded because of the cost.

For the most part the work can be done in the school. This gives the students an opportunity to witness, even to take part in the process.

Historical Background :

Silk Screen printing is known to some as Serigraphy, from the Greek words "Seri" for "silk" and "graph", "to draw". It is also called Mitography— from "mitos" meaning "threads" or "fibres".

The earliest prototype of the method in use today, of which we have positive knowledge, is the old Japanese method of stencil making. In that method, duplicate stencils were cut from very thin paper. A layer of hair was laid in criss-cross fashion between the two stencils and the whole permanently lacquered together. The hair held the centers of the design in place, thus partly performing the function which is today filled by the silk.

How Printing is done :

Fundamentally, silk screen printing is a modification of stenciling which most people have done. In fact, many individuals find that silk screen printing much more simpler than using complicated stencils.

In this process semi-liquid pigment or paint is pressed with a squeegee through a fine mesh silk screen stencil to form a given design upon any desired surface—paper, wood, cloth, metal, glass—anything. The stencils may be prepared in several ways. Three methods are described in the pamphlet, "Printing by Silk Screen", recently produced by the Indo-American Technical Cooperation Programme. These are the Gelatin Blockout method, the Paper Stencil method and the Tusche method, which you will see demonstrated in a few minutes. These stencils are prepared on silk, voile or organdy which has been tightly stretched onto a sturdy wooden frame.

This pamphlet also gives basic requirements and procedures for making the silk screen printing frame, making a squeegee, the printing process, cleaning the equipment, printing multiple colors, and approximate costs of Indian made materials available in most local bazars.

Many different colors may be used in producing screened visuals but each requires a separate printing step. A stencil must be made for each color and preferably prepared on a separate frame. A single frame may be used for all colors by washing the first stencil out of the screen and preparing the second stencil onto the same silk. This process is repeated until the desired number of colors has been applied. There is no limit to the number of colors—as many as 20 have been used.

Care must be exercised in registering each stencil; that is to see that colors are properly positioned. It is important that the master drawing and the paper or other material onto which the poster is printed should be carefully squared. Registry guides made from three small strips of cardboard must be stapled to the baseboard in proper position under the screen. These Registry guides keep the artwork in a steady position during preparation of each color screen. They also keep the paper in proper position during the printing process. The same printing bed (or baseboard) may be used for all of the frames.

The poster or chart must be dried between each color to make certain the color of the previous stencil does not smear. This means that when you are printing a large number of copies you will need plenty of table or shelf space to spread out the prints of drying. If you often have large quantity production, it is preferable to build a rack for drying. Construction of a simple, inexpensive rack is explained on page 13 of the pamphlet, "Printing by Silk Screen".

Economic Use :

Serigraphy provides a means of producing effective, striking posters and charts in small quantities and at low cost. The process is therefore the best one to use when you need a few duplicate prints of a colored poster or chart. From 10 to 300 copies is generally regarded as the best economical range of production by the Silk Screen method. This is not to say that less than 10 or more than 300 should not be done, but you will generally find that less than 10 charts can be produced individually by artists and that more than 300 can be produced by conventional printing methods at lower cost and in less time than by Silk Screen.

Hints to Teachers :

Often the classroom teacher thinks he isn't "arty" enough—he can't draw ; thus he feels he must depend on commercially prepared materials which are costly, sometimes not available, and almost never express exactly the thought he wants to put across.

What every teacher should know is that it is not necessary to be a finished artist or even to have a talent for drawing in order to make a simple, striking poster by the Silk Screen method. It takes thinking and planning, different perhaps but not so far removed from the kind of organization required to make a lesson plan. You think of what you want your illustration to accomplish, lay down the plan in outline form, and consider the main elements of your idea. You decide what is the purpose of the concept you want to illustrate and lay your emphasis there.

The design should be simple and bold. Reasonably fine details are possible of achievement, but they require lots of practice and lots of time. Simple Silk Screen printing is a very easy process which can be quickly mastered. The equipment needed is both compact and inexpensive.

You will find Silk Screen equipment a valuable asset in the preparation of your visual aids for teaching.

Now, let us see something of the actual process. In the interest of time, we have prepared the stencils and printed off some copies of 2 of the colours of this 3-colour poster. The third color will now be printed with a screen prepared by the Tuche method. You will also see how a frame is made, how the silk is stretched onto it, and the various steps in the preparation of stencils.

Bibliography

For those of you who are interested in further details on the Silk Screen process the books listed below are suggested for further reading :

- The Silk Screen Printing Process by J.I. Biegeleisen and E.J. Busenbark.
(McGraw-Hill Book Co., Inc.)
- Silk Screen Colour Printing by Harry Sternberg. (McGraw-Hill Book Co.,
Inc.)
- Graphic Arts Crafts by D. Kauffman. (D. Van Nostrand, New York.)
- Screen Process Printing by Albert Kosloff. (Signof the Times Publishing
Co., New York.)
- Mitography by Albert Kosloff. (Bruce Publishing Co., Milwaukee.)

PURPOSE AND PREPARATION OF RELIEF MODELS IN GEOGRAPHY

S. L. Ahluwalia

Three Dimensional Aids in Teaching :

The audio-visual aids have breathed life into the monotony of teaching. Their contribution in modern education is most vital in releasing teaching from the rigidities of traditions and formalities. Their introduction has developed a new multi-sensory approach in education in which the whole personality of the child comes forward to receive.

While most of the material is two-dimensional, the third dimension unravels new avenues of attraction and reality. The three-dimensional aids are most attractive because they aim at presenting the total situation on a small scale. They have a variety of forms like models, objects, specimens, mock-ups and dioramas etc. Of all such models relief or orographical models in the teaching of Geography have a special significance. Geography is the pivot of social studies and hence its teaching is fundamental correlative and basic in the elementary and secondary schools. Relief models can be an effective visual aid in at least 50% of Geography lessons and provide a potent background in most of the lessons on social studies.

Relief Models Defined :

A relief model is a recognizable three-dimensional representation of a country or a part thereof. The vertical development on a flat surface in semi-natural colour brings out the orographical features clearly. It gives a general impression of the contours and relative heights which can be compared visually.

Materials required and Technique :

Enlarge or trace the map whose model is to be made on a smooth wooden board. The dimensions of the board can vary according to need. Mark one conveniently lowest contour line on the map. It will usually be the 690' or 1200' line. Fix some $\frac{1}{2}$ " or 1" nails in such points where the height is to be about 3000' or more. Prepare papier mache and mix it with China clay, plaster of Paris and liquid gum. Kneal this mixture till you get a smooth paste. Put this papier mache paste in areas which are mountains and highlands and raise them according to their relative heights. Usually in utility models for frequent classroom use the vertical scale is to be maintained by visual comparison. Let it lie in shade to dry up. Then colour it in semi-natural colours of your choice or as the colours are in the corresponding physical map in the Atlas. Insert the details so as to complete the model (Intensive details).

Use in Teaching :

The child has to refer to the physical and environmental background as a motivating force of all social problems. Relief models help to study all problems of man in his environments. The environments are conditioned by Relief, Climate, Vegetation and other activities of man whereby he harnesses all these. For lessons especially on Climate, Vegetation and varied types of economic developments and occupation, such models will come very handy.

SCHOOL JOURNEY OR SCHOOL TRIPS

S. S. Bhatia

"Why do my pupils forget so much of what I try to teach them?" This is a perplexing question that teachers ask themselves and the same is echoed by the pupils but in other form : "How can I remember more and forget less of what I have been taught?"

These questions are not new. Since as long back as there have been teachers and schools, men and women have been striving for the answers. Some of us, concerned with this need of making learning more permanent turn to all kinds of possible sources of solution. We ask ourselves, why is it that sometimes we remember a speech we heard in our childhood as vividly as though it had been heard but yesterday while something we read last week seems so vague ?

We may find some clues by examining a few instances of learning that some-how have never been forgotten. For example, my teacher while giving a lesson on atmospheric pressure did not stop with just one example of

atmospheric pressure—such as the Magdeburg hemispheres which stick tightly together when the air is exhausted from them but gave at least five additional illustrations. He demonstrated some of them before us in the classroom. He also had our whole class do some experiments—simple ones of our own. I still remember very vividly the story of the Dove and the Bee because one teacher actually showed us a picture and then model of the hunter taking an aim at the dove.

These examples of memorable experiences are clear enough in themselves. They are concrete experiences. Each of them was a meaningful and rich experience.

Verbalism

The children know a number of words before being enrolled in the first grade, these they learned through handling, seeing, hearing, tasting and talking with others. These words are never forgotten. Of course, this is partly explained by the fact that they are frequently repeated common words. But even so, the method used in learning these words is one which makes for real understanding. The method, for the most part is through direct concrete experience. When a child learns to read, verbalism—the use of words which are not understood—becomes a steady danger, for he can correctly pronounce words that he does not understand. A second difficulty that works against right use of reading is the lack of association between verbal symbols and life outside the schoolroom. Unless the reading is attached to actual sensory-motor and associational experiences at the time of teaching, we cannot expect these ties to be made spontaneously.

The thinking and attitudes of students can be better influenced by realities rather than by abstract discussions. There is no better way to introduce, to review, to clarify and to give meaning to a subject than by a trip in which the real thing may be observed,

Classes on Excursion : Single Period :

A field trip is a planned visit to a point outside the regular classroom. It may be a place inside or outside the school building, Within the school itself, it may be an organised group trip to see and study the hostel kitchen, the school store or school tuck-shop.

Double Period :

A field trip may be made to a place within walking distance of the school, the class may study the trees in the school yard, note soil erosion on a nearby slope or a zoo or a museum, visit a neighbourhood grocery store—such trips may be completed in two school periods.

One Day Trip

The pupils may go further afield. They may spend half-a-day or more visiting a local factory, museum, bank, a college or fire station, river side, or historical places in the vicinity.

Week-End Trips

In some cases the class will go considerably further afield. Teachers and students may arrange a two or three day trip to the State University or a historical place or several such places.

School Journeys

These are of the duration of a week or longer camping at a place for special training or purpose. Visits to different places may be included in the programme e. g. places of natural beauty, of historical or scientific interest, industrial concerns, government offices, art galleries, museums and fairs.

Vacation Trips

They can be planned on inter-provincial and inter-university basis.

Post-Examination Trips

Students have a good deal of time after their examinations are over, that they do not know how to utilize. Educational trips can be of immense use.

The chief difference between a field trip and other educational experiences is that the students get their experiences in the field and not in the classroom. The field trip then, is a going out process in which students study the work-a-day world in operation. It is a serious educational study aimed to reach important planned purposes. It is a way of hitching the theory of the classroom to the practice of life itself. This does not mean that classwork is only theoretical and that field experience alone is practical. But in the classroom we can cover only a small portion of our total life. And we must get outside the school walls and into the community as students and as working participants if our learning is ever to become full and well-rounded.

The educational theory underlying the field trip is that you discover what something means by responding actively to it. You see it in operation. You cannot learn what something means by looking it up in a dictionary or an encyclopaedia and then repeating what was said there. The richer the experiences, the more meaning we bring to any experience, and the more meaning we get out of it.

Another fact to remember about field trips and other directly observed experiences is that there is no specific ready-made meaning in objects or factories

or fire-stations which automatically register in your mind when you make physical contact with them. Some meanings, the easiest ones, are got rather easily. But you must be moved deeply for the most important meanings.

It is easy to see the shining fire engine and staircase that the firemen slide down. Such objects are concrete and visible but it is harder to see the firemen as a community helper, as a part of a vast network of public servants adding to our well being by providing collective security against fire.

Planning: its Importance

Planning in advance is of extreme importance in field trips. Think of the hundreds of facts, even superficial ones that you could learn at a bakery, a fire station, a garden. Because of this, the teacher and pupils must work ahead of time, and discuss the key ideas that they are going to explore. There will be individual differences, of course, in what is learned. Those pupils who do not have active curious minds will be content with the rather simple, easy meanings that they get on such a trip. Others, who are intellectually alert and curious, will try to get much more meaning from their experience. They will ask more questions and keep thinking about what they have learned. They will relate their field trip experiences to another experiences which they have had. Some of them may see a new example of mass production, of cooperation, of good or inadequate housing. But they may not see it, unless they had planned to see it. Meanings then, do not hit the eye ready-made. You will profit from the field trip in proportion to what you bring to it.

How to Plan—Teachers' Preparation

In order to help in the planning of the field trip teachers should make a careful study of the places in the community which lend themselves to field trip study. Year by year teachers can file a list of useful field trips they have taken, the officials with whom they communicated, the quality of the field trip.

Some of the most common questions that students asked on their return from a flour mill, are:—

1. How do they dispose of such huge quantities of flour they produce ?
2. Do they use wheat from this state or do they mix it with other wheats ?
3. What do they do with the bran ?
4. Could we visit a bakery now ?

A school can work out a file with cards containing the following information :

1. Name, address and phone number of organisations to be visited.

2. Visiting days and hours.
3. Suggested transportation.
4. Time required.
5. Name of person incharge.
6. Admission fee, if any.
7. Nature of guide service.
8. Eating facilities.
9. Specific details about getting at the place of the visit.
10. Age of children permitted.
11. Class levels for particular excursions.
12. Nature of printed material available.
13. Evaluation of excursion in relation to the objectives in view.

A resourceful teacher will conceive many school journeys that will prove profitable to the students.

Some examples are

Local study situation	Units of study
Garden ...	Plants
Animal Hospital...	Pets
Farm ...	Dairy
Toy Shop ...	Toys
Biology laboratory	(Birds—friends and foes) (Insects—friends and foes)
Acid Factory ...	Preparation of various chemicals and acids.

As the place of visit has been decided upon the teacher should contact the manager to determine the following :—

1. Is a visit possible ?
2. What day and hour are most convenient ?
3. Is guide service provided ?
4. Are there any special precautions to be taken ?
5. What is the approximate time necessary for the trip ?
6. Is it possible to make the trip alone before the students visit ?

Before setting out for their destination the class will choose specific things to look for. They will have definite questions in their minds. These will assist

the children in developing definite purposes and will arouse their curiosity and interest in the experiences, understanding and factual information they will be able to acquire.

For example suppose the children want to visit an air port. Their objective may include :—

1. To learn how information on the weather is used by the airplane pilot.
2. To find out about the cost of passenger travel, the distance of a given destination and the time required to reach there.
3. To learn more about the duties of the stewardess.
4. To find out how airmail is handled.
5. To find out what makes an airplane stay in the air.
6. To find about gasoline consumption.
7. To learn how the airport serves the community.

As much responsibility as possible should be given to the children. In terms of their age and level of maturity they can assume certain responsibility such as the following :—

1. The children should write, telephone or interview the person in authority to arrange for the time of the visit.
2. The children should write letters to their parents and the headmaster -telling of their plans, route, purpose-etc., of the trip.-

The teacher should decide on the safest route. If transportation is needed travel concession from railway administration must be obtained well in advance or if that is not possible, some road transport should be arranged. He should arrange finance also. He should draw up a detailed programme date wise, if the trip is going to last for more than a day.

First-aid equipment should exist to meet any emergency in the case of an accident.

A scribe for keeping the official record should be appointed. Individual records should be kept by the members and the result integrated.

Students' Preparation

In order to prevent misunderstanding, inconvenience and loss of time each student should be given a memorandum carrying the following information :—

- (a) Place to be visited—full name.
- (b) Where the group will meet.
- (c) The time of meeting.
- (d) Means of transport.

- (e) Cost of transportation, food-fee.
- (f) Special tools or note-books to be used.

Actual Observation

(a) The guide is to be given a clear idea of the purpose of the trip. He should be given a set of questions prepared jointly by the teacher and the pupils.

(b) Pupils observe and hear the guide's explanation. On return from the trip, there should be a question period in which individual questions from pupils are presented and answered by teachers or pupils.

There should also be a period for note-taking and sketching by pupils.

Follow-up of Trip

The next day or as soon as possible, discuss the trip. Some points in this connection are :

1. Request students to present facts recorded in their note books.
2. Answer questions on doubtful points.
3. Show relationship to school work and value of information gained.
4. Develop a feeling of accomplishment and an attitude of appreciation for the opportunity.
5. Evaluate the whole experience by listing the benefits on the black board.
6. Take up some creative projects such as :
 - (a) writing poems, and stories, preparing drawings and bulletin board displays etc.
7. Write a letter of appreciation and thanks to the manager and guide.

Suggestions for a successful trip

1. Plan some 'observation' or activity enroute to keep the students busy.
2. Know exactly how to reach your destination so as not to waste time.
3. Do not crowd too much in a trip.
4. Be sure to speak to each member of the group at least once during the trip.
5. Plan every minute of the 'trip' to avoid problems of indiscipline.
6. Try to ask a question or point out something interesting to each member of the group.
7. Encourage the students to participate in discussion by asking question. Discourage a passive attitude.

8. Avoid a donnish attitude—permit students to relax.

Instructions to Students

1. Avoid boisterousness. Remember a school is judged by its representatives.
2. Exercise all safety signs and precautions.
3. Do not tamper with machines, equipment and materials.
4. Follow the instructor's directions.
5. Respect the property and rules of the management.
6. Take complete notes, to be used in discussion and writing an account of the trip.

THE FIELD TRIP

Sohan Singh

Man has been a wandering animal so long that nomadism has entered deep into his being. Even the most docile and stay-at-home among us cherishes some secret *wanderlust*. And as it is the habit of man to rationalise what his own raw nature dictates, there have not been lacking wise men who have praised and even idolized their instinct to follow the lure of the unknown. You will remember the famous "Charaiveti" hymn in the *Aitareya Brahmana*.

Psychological Basis

The fact is that the infinitely variegated sound, smell and colour in Nature and the genuine handiwork of man exercises a vastly greater power of attraction on his mind than all the gilded substitutes that his art or artfulness can assemble. This, combined with the endless curiosity of man, explains the fascination which "Charaiveti" holds for him.

I could illustrate this fascination of the actual and the genuine by a hypothetical case. Through the Mt. Palomar telescope scientists have been able to see the moon as if they were just ten miles from it. And, by means of incontrovertible theories, they now know as much about the moon as if they were living on it. But you can imagine the excitement which men on earth would experience when the first of them who has been on the moon comes back to tell us of his experience there. And what if that lucky man would be none other than your own self? A thrill which no wealth can buy.

There is one thing about the genuine and the actual that imparts an educational quality to it. It is its ability to be assimilated—a vastly greater

assimilability than belongs to any substitute. The actual and the genuine fills us with the richness of sense experience denied to its substitute and hence achieves a far easier, smoother and more lasting entry into the universe of our minds.

A journey undertaken for any purpose has therefore the power to orientate the mind by the sheer vividness and fullness of the experience it brings with it. Words can offer you only a vicarious experience of pale hue. A description of the life of slum dwellers, even if done by a master of words, cannot move you to do something about it as can a first-hand sight of the misery and sordidness in the lives of these unfortunate people.

Educational Value of Field Trips

In this, not the whole, but the crucial part of the educational value of a journey or a field trip—its value in enriching the mind and expanding its horizon and at the same time giving an orientation to it through the magnetic qualities of a new experience. And this essential educational value of a journey has been recognised in India and elsewhere since ancient times. For example, a good Indian was ordained to do the four pilgrimages—one to each corner of India—so that thereby he might comprehend the fullness of the Indian civilisation and hence gain an insight into the *dharma* that this civilization enshrined within itself. In our own life time the stentorian voice of Hitler pressed on German youth “the saga of the tired feet” as a potent means of instilling into their minds a knowledge and love of their Fatherland. And how many of us wish that the Indian youth could pursue “the saga of the tired feet and the loving heart” so that they may know and love their motherland in all its variety and persisting unity. Finally, with all his mental time-lag modern man is better educated than his predecessors and this is due in a large measure to the fact that he roams over the globe much more than they did. In fact modern facilities of travel have given new life to the theory of one world and many wise men think that an essential condition of translating the theory into practice is that international travel should become more free and general.

Modern Educational Systems

So far we have caught this concept of the journey or the field trip as a means of education, as it were, only in the raw state. We have to cut its edges and give it a polish to fit it into the modern educational system. For we should remember that mere travel, especially a plethora of it, may dull the senses and cheat the mind of its distinctive heritage of the excited enjoyment of the presence of the new and unknown. I remember I was once enjoying the vast panorama of Paris from the top of the Eiffel Tower. A “tourist” leapt out of the lift, rushed to the small shop which the shrewd French had put up at the top of the tower, bought a souvenir postcard, scribbled a few words on it in a hurry, handed it over to the postman there and rushed back to the descending

lift. I wonder what good this meteoric journey did him. We have similarly heard and wondered at the group of American soldiers stationed in Europe who during a nine-day leave "did" the whole of Italy and Near East.

To get full measure out of the trip we have to approach it with the questioning mind, the sense for the new and the unknown and the desire to grow in knowledge and, if possible, in wisdom too. And if this approach is not natural, it has to be gained by technique—a technique which audio-visual aids can neglect only to their own debasement.

What is the use of Audio-visual Aids ?

For audio-visual aids offer us only perceptions. They operate only at the perceptual level, the level of the *homo sapiens*. Man comes to his own only through abstract, conceptual thought. The more abstract and the synthetic his thoughts are the more does he attain to his own distinctive nature. In the truth of this statement lies also an excellent principle of evaluating audio-visual aids. Do the aids we use bog us down at the perceptual level? If so, they are unworthy of us. Do they facilitate our rising to the regions of the abstract? If so, they are good and we should eagerly integrate them in our educational system.

Educational Technique of Field Trips :

We spoke a little while ago of a technique for winning the educational value out of a field trip. And the technique we hinted was designed to awaken the mind. We can analyse three aspects of it.

In the first place, all education starts from a purpose which has its own context, a universe into which it naturally fits. The individual taking the journey or the trip has to be aware of the purpose as well as its universe. And we have to be sure that he has both these awarenesses. Thus if we visit a fire station we have to know why we are visiting it—e.g. to understand at first hand public service, and the place that the service offering the protection against fire has in our society.

Now, the purpose and its context are not matters of sense-perception. They relate to concepts. Concepts are realities of the mind which are slippery and evanescent and are best captured in words. And words came to us through a readable material or a sensible talk. It thus transpires that in order to understand the purpose and the context of the purpose of a field trip you have to prepare the individual through a talk or a discussion or a reading assignment. On grounds which we need not now go into, an educationist will not agree to assign reading a second place. And though the talk or the reading material itself, may be helped by visual aids, the ultimate objective is to arrive at the relevant concepts through listening or reading.

This is the first aspect of the technique. The second aspect is to sensitise the mind beforehand to things the individual is expected to encounter in the course of the field trip. Without this sensitising of the mind it may fail to notice them, or at least fail to notice them from the perspective which is best conducive to the growth of his knowledge and understanding, or in other words, to the growth of his personality. And one way in which we can sensitise a mind is to arm it with questions, with items which have to be looked for and even searched for amidst the plethora of sense experience the trip will offer the person taking it. We have thus to arouse the mind through certain expectations.

Thirdly, we have to take advantage of the excitement caused by the things seen and heard in the course of the trip for arousing new understandings and new interests or, at least, in strengthening useful pre-existing understandings and interests. This is evidenced in the activities—reading, making, doing etc. which follow the trip. These activities build up new concept or enrich old concepts.

Thus the technique of extracting the maximum educational value out of a trip consists, firstly, in arousing a purpose in the trip and preparing the mind for it through reading and listening about the topic of the trip; secondly, in arousing curiosity through expectations and "points of interest" and, thirdly, assimilating the observations made in the trip through an awakening of new interests or strengthening of the pre-existing interests and thus enriching and expanding the conceptual reach of the mind of the individual taking the trip. This threefold technique applies not only to educational journeys or field trips, but to all audio-visual aids. Remember, from first to last, the objective is one—new concepts or deeper meanings or expanding vision.

Other Aspects

Such is the intrinsically educational aspect of a field trip. But we have to bear in mind two other aspects of it, which though not directly derived from the field trip as such, are yet those which an educationist cannot afford to overlook. Firstly, the field trip is also a work undertaken and must therefore conform to the norms and routines of a work well done. Secondly, the field trip with which the educationist is concerned is also a social fact and therefore has to conform to the norms which govern desirable social relationship.

Both the aspects deserve a further analysis. And firstly, the good work aspect of it. Any work which is undertaken and has to be done well has to be well planned, well administered, and finally appraised.

Planning

In planning a field trip, e.g., we have to foresee what has to be done when and where—e.g., when and where has the participants to assemble? When,

where and what transport is to be taken? Who will show them around? etc. And then having foreseen to the minutest possible detail the course of the journey, we have to build up a workable time schedule. Further, we should also ensure that whatever is needed for the working of the schedule has been secured.

One of the good points in planning is to ensure that the original purpose of a trip is not lost in the course of it. A field trip, in the context in which we are studying it, is undertaken with an educational objective in view. The plan should, therefore, ensure that it does not become degraded into a mere recreational hike.

Finally, planning in bits or by spurts is not good planning. Not only must the field trip be planned, it must itself fit into a plan. This wider plan we call the curriculum. The field trip must enrich and fulfil the curriculum.

Administration

Administration has a positive and a negative aspect. Positively, administration has to ensure, first, that whatever is necessary for the working of the plan is available at the right time and right place. For example, if the plan says that the participants will have their meals at a certain time and at a certain place, the administration has to see to it that the right type of meal at the proper cost is actually made available at the time and place planned for.

Secondly, the administration has to ensure the proper condition of all men and materials which enter the plan, e. g., the boys and men who take the trip have to be kept in perfect health to enjoy and benefit from the trip. The administrator should therefore ensure their proper food, rest, recreation, morale etc. Similarly, he has to ensure that the materials necessary for the trip, the kits, for example, do not give any trouble.

Thirdly, the administrator will see to it that whoever has been assigned certain responsibilities, has also been provided means to discharge those responsibilities and that he does discharge them.

Negatively, administration has to secure the trip against foreseeable hazards, accidents etc. In particular, the schedule should be so arranged and administration so good that the participants do not get fatigued or their sensibility jaded. Further, all measures have to be taken, for the safety of persons participating in the trip and even first aid ensured for any eventuality,

Evaluation

Evaluation is as necessary a part of work well done as it is neglected. It is no doubt a process of looking backward, but one field trip finished does not put an end to field trips and a backward look will pinpoint our successes as well as our failures, so that in future field trips may be more wisely planned.

Not is that all. A good evaluation will possibly reveal the gains from the field trip, gains which many if not all the participants share, and thus help to build up their confidence in themselves, that is to say help to build their personalities—something which an educationist always and eagerly looks forward to. A clearly worded and cooperatively worked out report of a field trip greatly helps in this evaluation.

We have spoken of the administrative needs of a single field trip. But if field trips become as general and widespread as they deserve to be then a new responsibility falls on the administrators of education in the States, i.e. to say, our Education Departments. The administrators will have then to prepare a list of places to which field trips could be undertaken by children and adults, the points of interest in these places, the subject matter of study in which they can be integrated and points which administrators of single trips should bear in mind while visiting these places.

Social Aspect of Field Trips.

We will now pass on to a hurried glance of the social aspect of a field trip. A field trip involves many persons. For example, the following types of persons will be involved in a field trip undertaken by a school class—the children, the teacher or teachers who will accompany them, the parents of the children, the persons concerned in the place which is being visited and other persons, e. g. public servants. The goodwill of all these has to be secured for the field trip—good-will based on knowledge and understanding. We may call it the democratic relationship. Thus the children have to participate fully from the planning to the evaluation stage, the consent and even the enthusiasm of the parents should be had, the good-will of the persons concerned at the place to be visited has to be secured beforehand by telling them about the purpose of the trip etc., and it has to be impressed on all participants that every public servant has to be given the courtesy and consideration he deserves.

Another side of good social relationship is the division of responsibilities between the participants. There are so many things to be done on a trip—arranging transport, food arrangements, etc. etc. Let each item be assigned to each participant, or rather divide the responsibilities among groups of children. For, if they are in groups they will also learn the leader-follower relationship which it is so essential to learn in modern society. Further, the teacher should see to it that both the leaders and followers are trained for their specific roles.

The third point to note is that in a task where many persons have to make their contribution the line of authority must be clearly marked and the direction down the line of authority should be precise and unambiguous. Thus there should be a supreme leader of the trip from whom all orders should issue and whom all group leaders have to report for instructions from time to time.

Finally, good social relations demand constant communication between the partners in the task. The communication can be general or specific. The general communication is ensured by common meets for cultural and recreation-all purposes. These are desirable and even necessary in longer trips. On journeys which take some day there may be general reports of the previous day's work and interesting experiences of participants. Specific communication takes the form of each group leader giving a report of work done by his group to the next higher one in line of authority and passing to his group the instructions received from above. Clarity and precision constitute the soul of such reports.

Rightful Place of Field Trips

We have given in the above the springs of the enjoyment and educational value of journeys or field trips and the techniques which will tap the maximum value out of them. We have seen that the direct and auxiliary educational value of a field trip is so great that it deserves a regular and assured place in the educational curriculum of children as well as adults.

This rightful place of the field trip, however, has yet to be won for it. In the field of Social education some headway has already been made. This is so because informal methods—and field trip will remain an informal method at least for some time to come—have better chance in Social education than in school education. In fact field trips have been officially encouraged and sponsored and the various conferences dealing with Social education have repeatedly emphasised their value in this field. Social educationist will hear more and more of field trips as their work develops.

In school education the situation is not so hopeful. While the value of field trips is being recognised more and more, action is lacking. It is necessary that our Education Departments should take field trips seriously. For, they not only yield specific educational results, but also help in achieving one of the highest of objectives cherished by all of us—pride in the achievement of our people and the consciousness of the many seen and unseen links that hold us in a harmony and a unity. It is only when our children will frequently visit place far from their homes and visit them as only other homes for them that this objective will be achieved.

But if the Education Departments prefer to follow the lead rather to give it, it behove the teachers to give joy and education to the children in their charge by taking them to places which will fill them with new experiences and of course new ideas.

THE EDUCATIONAL BROADCAST

H. S. Bhola

Many countries of the world today have developed very complicated and elaborate systems of school broadcasts and teachers make a full and proper use of these broadcasts. In the U.S.A., for instance, a school without a radio would be considered an "educational tragedy in the midtwentieth century." The Australian Broadcasting Commission (the A.B.C.) lets the teachers themselves plan the school programmes. Regional Advisory Committees of teachers select subjects, specify the scope and time of the broadcast, and recommend experts on the subjects. Teachers are trained in the utilisation of school broadcasts, inspectors go round to evaluate them; interesting integrated material like charts, booklets, filmstrips is produced by the Australian Ministry of Education to go with the broadcasts by the A. B. C. These are almost ideal conditions. It is unfortunate, however, that countries which lack the educational facilities found elsewhere have not made full use of the radio.

In India

In India, for instance, the system of educational broadcasts is not so well organised as it should be. There are various obstacles: the hesitation of the teacher in accepting new methods; the problem of teachers' training in programme utilisation and the non-availability of equipment. We are doing our best to remove these obstacles. A consciousness of newer teaching tools and techniques is being created among teachers; and they are learning the methodology of their utilization in the various training courses, seminars, and conferences which are being organised for them at the State and Central levels. The difficult problem of the non-availability of equipment is also being solved. Many schools have already come to possess their own radio sets and many State Governments have provided for the supply of radio sets to High/Higher secondary schools during the Second Five-Year Plan of educational development. A proper and progressive use of the educational broadcast by the teachers will surely in turn contribute to the emergence of an elaborate system of school broadcasts in India—a very desirable thing to happen.

Most of us need no introduction to the subject of educational broadcasts. We may however, note the peculiar qualities of a radio broadcast; the subject that lend themselves most easily to the radio; the problems in receiving school broadcasts; and the way school broadcasts should be used for best results.

Quality of broadcasts

No doubt the radio broadcast has about it certain qualities which a printed lecture or a press report could not possibly have. These qualities are its immediacy, its realism and its emotional impact.

A commentary on a cricket match or a debate you listen to over the radio brings you almost in the midst of the event. The radio broadcast has a dynamic realism about it. The voice of the speaker rises or falls or swells and you hear as well the background noises of hooting and clapping. Its emotional impact is equally great.

It is not out of place to mention here that the *per capita* cost on receiving a broadcast is negligible once a radio set has been purchased, and radio lessons are sometimes better and maturer because they are the result of more time, greater skill and specialised training than an individual teacher could offer.

Subjects for broadcast

Subjects like social studies, language, science, music etc., are very commonly treated in school broadcasts. Inspirational material, such as speeches by politicians and thinkers, recitations by authors themselves, plays and dramas acted by professionals, enrich many classroom. The latest developments in science, medicine, mathematics, aviation and in other fields make the pupils as well as the teachers aware of what is happening around them. There is no limit to the ingenuity of the teacher and the organiser of school broadcasts. Even subjects such as cookery and painting have been successfully handled over the radio. Guidance lessons to help children make healthy adjustments—mental, physical and social—have claimed wide popularity in the United States. Generally speaking a teacher can use the radio with two objectives in view, equalise to enrich the classroom teaching and to educate for a wholesome use of leisure. The latter problem is also of great significance in the modern age.

Some Problems and their Solution

Now let us examine the various points which may arise in inquisitive minds with regard to the effectiveness and utilisation of educational broadcasts. The first difficulty is that the radio is a one way communication. But the question hours over the radio, in which questions by listeners are answered, go a long way to removing this difficulty and the teacher is always there to help the pupils. There comes the question of the inflexibility of school as well as radio programmes. This is the knottiest of all problems. The answer is the tape-recorder and the time-zone broadcasts. The broadcasts can also be generally synchronised with the time tables being followed in the schools so that the teacher may have the broadcast in the month or in the week he would need it. Again the educational broadcasts over the radio have to be brief for it will not be possible for a broadcast to hold student attention for more than 15 to 20 minutes. A proper selection of the subjects and the topics can solve the problem. Too much condensation of a topic to cover it in 20 minutes or less is another source of embarrassment. The solution lies in a proper follow-up

of the broadcast when the points raised therein can be amplified and further explained by the teacher utilising the broadcast.

Some teachers would object to the standardisation of the lessons over the radio and to the fact that a radio broadcast cannot be previewed. But these are not very serious objections, for the broadcasts are always suitably graded and offer good material. Introductory and follow-up material is also sent out well in advance of the broadcast so that both the teacher and the pupil are prepared for what is coming.

Some Suggestions for Utilization

In the end, the following suggestions may be offered for the utilization of broadcasts:—

1. The programmes should be discriminately selected for a particular group or class of students.
2. The class should be suitably prepared to receive the programme.
3. The broadcast should not be considered as a substitute for regular teaching.
4. The broadcast should be integrated with classroom work.
5. Full attention of students should be insisted upon. Taking down of notes and other writing work should be avoided during broadcasts.
6. The broadcast should be received in the classroom itself. Auditorium and other large-room sitting should be avoided.
7. The broadcast should be supplemented with other aids.
8. The programme should be suitably evaluated in relation to its aims and scope.

To summarise: the programme should be properly selected, suitably introduced and adequately followed-up after presentation.

LEARNING LANGUAGES BY LINGUAPHONE.

(Followed by a practical demonstration)

Homai Jal Moos

Today, the people of other countries are like neighbours on the other side of the garden wall. Nations must draw ever closer in understanding and discover a common ideal and way of life to ensure the preservation of peace in the world. Those who desire to serve the cause of civilisation must learn to

speak to other peoples in their own tongue. Apart from its practical importance, this is the most obvious of courtesies, the simplest gesture of goodwill—the beginning on which all else depends.

A complete Linguaphone Course consists of a series of lessons on gramophone records giving descriptive talks and conversational practice. The main textbook contains the full text of all the records mentioned in them and keyed by numbers. The Course, which is accompanied by interesting instructions, is carefully planned and adequately annotated so that nothing is missed.

Applying the Natural Method

The first, the 'heard sound' then, the 'seen object' then, the 'written symbol' this is the natural method by which one so successfully learnt one's own language. In addition, comprehensive instruction in grammar is supplied with the course. It is a talking textbook, with the material skillfully selected and arranged to consolidate the teachers' work in a fascinating and natural way, holding the attention and bringing a sense of realism to every lesson.

George Bernard Shaw was so impressed with the educational value of the Linguaphone, that he consented to write for the benefit of linguaphone students a special article entitled "Spoken English and Broken English", and to record it on two discs autographed by himself. Everyone who knows anything of Shaw knows also that his approval was not lightly won, so that this record constitutes in itself a powerful testimony to the excellence of Linguaphone.

Sinclair Lewis, when accepting the Noble Prize, made his speech in Swedish, which he had mastered by the help of the Linguaphone Conversation Course.

The Linguaphone method is only a quarter of a century old, but in this short time it has revolutionised the teaching of languages. As a method, it has been accepted and welcomed by universities and schools all over the world. Fourteen universities in India have Linguaphone records.

SCHOOL BROADCASTS

M. Choksi

R.F.T. or the Radio, Film and Television are mass media. They are capable of making a strong emotional impact, but also liable to *confuse*. Furthermore, as educational tools they provide *one-way* communication. They speak with power and authority but they speak out into space. There is a gulf

between the producer and the mass audience ; at least, there is no moment-to-moment contact, as in the theatre or the classroom. Whereas the educational process is essentially a *two-way* traffic. Every teacher knows how he explains, questions, tests, applies, corrects misapprehensions from step to step. Clearly, there is a severe limitation on mass media, if used without the teacher. They may set the questions but they do not hear or see the answers.

Teachers' Cooperation

Any bit of educational broadcasting that sets itself the task of *direct teaching* has to make elaborate plans for counteracting these disadvantages. There is a very interesting example of a Swedish course for English language teaching in primary rural schools that assumed the untrained teachers' constant cooperation, sent questions and instructions how to correct them and employed supervisory secondary teachers as well. There was also a novel television scheme in America for naval reservists, with a two-way telephone all the time. It, however, broke down. And this happened in a country of mechanical efficiency.

Here, then, are these media, powerful but with strict limitations, capable of producing strong and at the same time confused impressions and perhaps misapprehensions. Yet, as tools in the teachers' hands, their value can be considerable. And hostility towards them on the part of the educational administrators may well result in their use for propaganda only or for sensation and violence, or at best, cheap entertainment.

Education without R. F. T.

There have been quite a few books and articles, and good ones too, discussing education without any reference to R. F. T. even saying that the educational process is quite independent of R. F. T. They could perhaps be ignored if they were not there. But once they are there as among the most powerful forces acting on our children outside school, it would be ostrich-like to shut our eyes to them. For if these powerful forces are not used with care and conscience within the educational system, their use may bring more harm than good. Only in the schools can be built up a sense of values and standards that would lead to public appreciation of these media. There are many effective results radio can obtain in schools. But even more important is what schools can demand of the radio, by training children in what to expect, ask for, and get the right things from it.

The World into the Classroom

Broadcasting is a significant feature of modern life and, even in India, of the urban child's normal environment. With the expansion of a network of Community-Development Projects, it is definitely penetrating into rural India.

It offers opportunity for the opening of new windows to the mind, and should therefore form part of the teaching material in schools. To dissolve the classroom walls, to take the classroom into the world, and to bring the world into the classroom, has been accepted as an important part of the teacher's work. It is one for which the radio provides him with exceptional facilities. In the last fifty years book illustration, as well as films, have enabled our eyes to travel far and wide. The radio enables our ears to travel equally far.

School broadcasts in India

All India Radio, Bombay, has been broadcasting to schools for the last eighteen years. All stations in India have school broadcasts, most of them in several languages. They are advised by Consultative Panel in matters of timing, of preparation of programmes, of selection of speakers and allied questions. These Consultative Panels, on which are represented headmasters, inspecting officers, etc. meet twice a year to discuss the programmes for the following term.

The question of timing has always been a difficult one. As long as it is within or just after school hours, in the sense that classes can listen as a group on the school set, A.I.R. would certainly accept any time that a State Headmasters' Association unanimously, or by a decisive majority may suggest. As things stand, opinions received from schools have been found to lead to suggestions so conflicting that they cannot possibly be satisfied. The present varied timings in different States have been adopted as, at any rate, the least inconvenient to the great majority of schools. As a Unesco pamphlet puts it, that hour is most suitable which the majority of schools ask for.

Series of broadcasts

Bombay broadcasts programmes in Marathi, Gujrati, Kannada, Hindi and English. Programmes are usually provided in languages and literature; History (Indian and World); Civics and Citizenship; Geography; Science and Nature Study, Vocational Guidance, Community Singing; Music Lessons and General Knowledge. As isolated talks leave very little impression, they are always arranged in a series of three to eight talks. Each talk can be followed as a separate unit, but a class naturally profits much more from listening to a whole series, which yields a more coherent and definite educational result. Programmes are provided for both Seniors and Juniors, the usual range being from Standards VI to XI that is to say ages 11-16. For the use of listening schools, the stations provide charts and pamphlets that are sent before the opening of each term's programme. These enable schools to know before-hand what the term's programme is, and to have some idea of the scope of the talks.

Reports from Schools

It is extremely helpful to the station to receive regular reports from listening schools indicating the suitability or otherwise of talks and suggesting

improvements based on the teacher's actual experience with a listening class. We have, on various occasions, tried to secure reports by sending proformas, but the response has been usually very meagre. The habit of answering forms has not yet got into our blood. Excellent terminal reports are sent by a few schools. Many stations have a School Broadcast Supervisor to visit schools and collect impressions.

Expert in the Classroom

How does radio enrich schools? It can bring to the classroom the voices of outstanding men and women, statesmen, scientists and others with countrywide or world-wide fame. But this can only be occasional. It can more often provide material presented by what may be called non-professional teachers from other walks of life—authors, scientists, journalists, travellers, who have something special to say from their special experience. The expert or the visitor, whom every school would like to invite but may not always be able to reach, thus finds his way into the classroom of every school.

Such people may not always be easy to find, and they do not always know how to get across to children. But when they do, they are a great asset. For instance, children can get quite enthusiastic over hearing *Kavita Vanchan* or *Kavya Darshan* programmes when poems in their school texts are read and explained by the authors themselves. They love to be told how the Census of Lions was taken in the Gir Forest by the men who actually organised it, or to hear of the fleet-footed wild asses of the *Rann* of Cutch from the naturalist who lassoed them from a running motor-car. Their impressions of the country are sharpened when they hear the traveller in Japan who tells them of the number of children's parties she met sightseeing in February, and how she disliked tea without milk and sugar. The Indian Unesco expert on desert reclamation gave the children rather difficult material when he talked about the measures taken for taming the Thar desert, even so the children did enjoy listening to the expert. The voice and presence at the other end of an actual participant in some real event, whether such a person has been exploring the Himalayas or going after flamingoes is thrilling in itself.

Correlating broadcasts with Syllabus

Next, and much more often, School Broadcasts can provide material presented by first-rate teachers, known for their modes of presentation: the fact of multiple reproduction of well-presented material being, of course, of exceptional value when it reaches schools in isolated surroundings. A very successful series of this kind by the Principal of the S.T. College entitled 'Have Animals Mind?', correlated the subject of Evolution with the General Science Syllabus. Another good series was on Civics and Administration where a skilful teacher introduced Municipal, State and Union Governments through *Your Lamp-lighter*, *Your Policeman* and *Your Postman*. Topics from the General Science

Syllabus, as yet not too familiar, have been dealt with, sometimes very skillfully, by some teachers; e.g. Breathing in Mammals, Birds, Reptiles and Insects. Several talks by teachers of repute were arranged on the compulsory textbook in language and literature for the S.S.C. class.

Radio and auditory arts.

The radio can vividly put across the various auditory arts—poetry-reading, drama, music, of a standard which would not ordinarily be heard in most classrooms. How welcome these would be depends on the school's own resources. In one school the boys told the Supervisor how much they enjoyed the Music Lessons in which songs were taught to a group of children in the studio for the benefit of the listening schools. At another, with a high standard of music, they didn't take much interest in them. Both were well-known and good schools. A production of *Shakuntala* was much appreciated some years ago. Scenes from Dickens, though rather difficult, went off very well last term with some English-teaching schools, because the production was exceptionally good.

Dramatising History

The radio can exploit dramatic presentation in various ways. Playlets may dramatise great moments in history, e.g. a series featured famous trials of Socrates, Joan of Arc, Galileo, Charles I. Great moments in invention, discovery, exploration have similarly been successfully "featurised". Simpson falling down at the table while sniffing chloroform, Pasteur anxiously watching the first patient he inoculated for hydrophobia, the first steam-boat sailing down the river and similar occasions provide interesting material.

With regard to the content of the programmes, experience everywhere reveals opposed *schools of thought*. Some teachers, headmasters and inspectors believe that programmes must be closely linked with the syllabus; only then will they be followed. Others argue as strongly that the syllabus should be left to classroom teaching and textbooks; and that School Broadcasts should be like the guests invited to speak at a school. This comparison was made by a headmaster in a Consultative Panel Meeting. School Broadcasts, the second group argue, serve no specific purpose unless they provide a new outlook or information outside the normal range of the classroom, though linked with it.

The school broadcasts on A.I.R. usually try to supply both groups with something to suit them. Of course the broadcasts must be linked with the curriculum and yet they must provide some new element, if not new information. The broadcast will often rearrange the content of the curriculum in new schemes—take cross-sections, panoramic surveys of subjects to enable the children to see the march and sweep of civilization, e.g. the story of Law from the Law of the Jungle to Law under Democracy, the Quest for Food from the Stone Age to the F.A.O. Or they can centre round some point of contact with child life, e.g.

Geography can be presented through the animal life of different regions, through the world's clothing, through the contents of the child's dinner *thali* etc,

Sometimes the new slant is secured by presenting the material as from the angle of the person on the spot—the explorer at his goal, at the source of the Nile or at the top of some peak or a child living in a different geographical setting, e.g. children of the Arabian Desert, or of the Jungle of Borneo. In history, the story, centring experience round a child living in a past age has been very successful, e.g. the seal-cutter's son at Mohenjo-daro, the son of Samudra gupta's groom who rode with King Samudragupta on his whirlwind campaign, the boy who took food to the monks at Karla, the boy who sailed with Kanhoji Angre, the boy who watched the ships unloading at Broach or Surat in the days when these were great ports.

The element of wonder transfigures daily life and it can be brought in by showing the long and slow evolution of common and useful things—the wheel, the lamp, the match-box, money (starting from shells and dogs' teeth and going on to the World Bank), the story of the book from Tsai Lun's first invention of paper to the modern printing press, the travels of common food plants—how sugar travelled from east to west, and the potato from west to east, how the *naranqi* became first a norange and then an orange.

Reconstructing Science

Science can be reconstructed from the point of view of the first discoverers. We can have great discoveries about heat, electricity and the gasses. Scientific discoveries are often as exciting as detective stories and can be so presented—the Missing Planet (Neptune discovered from the misbehaviour of Urannus), the Missing Food Factor (Vitamin C discovered by Captain Cook as something in fresh food), the disappearing gas or oxygen, the chickens who didn't get cholera and put Pasteur on the track of immunity and inoculation.

Sometimes a straight talk provides new material that is appreciated by respective teacher though others may object to it as difficult. For example, a talk on Radar led to an invitation from a school in a rural area to our speaker to come and tell them more about radar, nuclear fission and other recent discoveries.

Similarly, various history talks in which a specialist told about the trade at Broach in ancient India, about the presence of Indian physicians in China, Baghdad, Syria, in the 6th to 8th centuries, and the life of the monks at Kanheri and Karla in Andhra were found difficult by some teachers, but were much appreciated by others who said, "Where could I have got all this material for myself and my pupils?"

Radio Supplemental to Teacher

This is not to say that the radio is a tool easily used in the school. Early utopians, administrators, rather than teachers, talked of radio replacing the teacher, but they were people who knew neither children nor teaching. The role of school broadcasting is purely supplemental to the teacher. Today every country's school broadcast system fully recognises the vital role of the classroom teacher in the success of the broadcast. Without the teacher's cooperation, it is, as a Unesco manual on the subject puts it, "depersonalized collective instruction". But often it is the keenest and best equipped teachers who avail themselves of this as all other supplemental aids to add to the greater effectiveness of their own teaching as well as to their pupils' mental enrichment.

The Unesco Manual comments thus on the role of the classroom teacher. "A broadcast may usefully be thought of as the *centre* section of an educational event having *three* parts: preface, broadcast and conclusion. Of these the first and last take place in the classroom, under the complete control of the classroom teacher. The central portion, the broadcast itself is provided by the broadcasting authority under guidance from educational interests. And the success of the whole process depends upon the successful relationship of the three parts: a problem to which close attention is required".

Preparation and follow-up

Preparation, however brief, is important. The broadcast must not enter the child's mind as a foreign body entering a living organism. A few minutes must be spent in advance briefing, stating objectives, what to look out for, or listen for. Even more indispensable is the resume at the end. The teacher may or may not find time to set interesting and varied follow-up exercises. But it is essential to spend a few minutes in retracing main points by question and answer, recalling impressions, replying to pupils' questions, correcting misapprehensions, clearing confusions, filling gaps in their impressions and building up a coherent picture from the transient auditory impressions.

It must be remembered that one does this for the textbook also. One does not leave the child alone with it. The child is to be trained to listen effectively as to read effectively. Guidance is necessary, as to the amount of note-taking that may be helpful, and also in telling children not to linger on a lost point.

Role of teacher

A classroom teacher throughout my working life, I am under no illusion about some the difficulties of the radio as a tool for school education. I will enumerate them briefly, so as not to give the impression of running away from them; we must grant against passive listening. The child must be kept mentally

awake and active while listening, and can be made to work actively on the material presented in the broadcast. This task falls much more for the broadcast talker or the classroom teacher, than the broadcast-maker or the studio-teacher. Secondly, repetition, recapitulation, going back and forwards over the same material is an essential part of the technique of teaching. The material obtained through the broadcast must be revised, recast, applied, but here again the classroom teacher will have to do all this. The school broadcaster obviously must know children, but it is only the classroom teacher who knows the individual child and how to use the material for him. Hence the Unesco Report (Education by Radio) emphasizes "the importance of the professional training of teachers in the adequate and intelligent utilization of broadcast", and states that a place must be found for this in the curriculum of the Training Colleges, even though it is "crowded to saturation."

After which you may ask: "Is it worthwhile making all this effort?" It must be remembered that listening in is a tool, a *skill*. And the child can no more deal with the broadcast material alone than with his textbook. He needs the teacher's further guidance to make an independent use of both. At the same time, there is no doubt the immediate gain—the variety and freshness, obtained through a voice from outside—a new window on the world.

Too interesting to be true

And what a keen, inquiring, critical spirit the children can develop! I remember a letter from a class saying they didn't believe one thing the speaker had said: "It was too interesting to be true!" Another class, listening to a talk "Travels of Food Plants" raised an objection to the statement that chillies were not indigenous; they could not believe there was a time when Indians did not eat chillies. They had to be sent a full list of sources. Then they proceeded to make their own list of indigenous food plants. They had quite a deal of activity and inquiry, and ended by making a manuscript magazine on Man's Quest for Food, with their own illustrations. They certainly got a lot out of the series. It was because their teacher cooperated so heartily.

Broadcasting on Nature Study

While teachers are now willing to take an interest in Nature Study, they are as yet insufficiently equipped in this subject. Hence our School Broadcasts have tried to help them in various ways. Some series bring in the element of wonder and adventure by dealing with such topics as Taking a Census of Lions in the Gir Forest, Hunting for Flamingoes' Nests in the Rann of Cutch, The Habits of the Gaur, the World's Largest Wild Ox. But the chief aim of Nature Study is to cultivate observation and to make the child conscious of his surroundings and to the changes that the seasons work in them. This is done through a series like Nature in the Monsoon, the Changing Year, and discussions in the studio following on actual Nature Rambles; some of these rambles have

been to Kanheri Park, to a Weaver-Bird Colony, a Water-Bird Colony, Pond life and so on. The Rambles and all the Natural History Programmes are planned and worked out in close cooperation with the Nature Education Organizer of Natural History Society: the latter usually follows up the Radio Ramble and Discussion with another ramble to the same place and for the same purpose which is attended by a larger number of schools, many of which have been stimulated by listening to the discussion in School Broadcast programme.

Children's Participation Programmes

A school broadcast system must make some time for children's participation programmes, such as School News, Debates, Listeners' Corner. But that is not its main function. When a great amount of School Broadcast time is devoted to children's entertainment programmes prepared by the schools themselves, one often discovers that each school has been listening to its own programme and not to those of other schools. The school broadcast hour has become a display hour and ceases to be an educational tool. My experience in going round and listening with the schools has always shown that the main appeal of the entertainment produced by children is to the producing children, in whom it may generate a spirit of display and exhibitionism. I found this impression corroborated by reports on School Broadcasting in the Unesco Manual, Education by Radio. The general principle laid down is that such school-produced entertainment has a very much larger place in the Children's Hour, than in School Broadcast hours. Of course, there is another type of participation—in dialogues, lessons and features, that are in another category altogether.

Conclusion

In conclusion, I would go back to this wider question of what training in the early stages can do for improved standards in the use of mass media. The fact that we have a vehicle which can reach a million homes, or ten million school children does not mean that sweetness and light can be poured into them without considerable mental effort and planning.

FILM APPRECIATION IN SECONDARY SCHOOLS

P. D. Khera

Why Film Appreciation and not Art Appreciation ?

The Twentieth Century is faced with a dilemma of its own creation. The art of cinema, which it nursed in its earlier days and developed during thirties, has now come to occupy an important place in our culture and is a constant

source of happiness to millions of people rich and poor alike who fill the cinema houses of the world. It has in its proper use a powerful and beneficent influence upon the community; its cultural and educational potentialities are great, while as an instrument of propaganda it is on a par with broadcasting and the press. It is expanding and capturing new dimensions daily—from silent films to television films is a far cry. With the increasing dimensions, its impact and force is being increasingly realized, while it marched parallel with the concept of perception in having a wide arc screen of 150° which is the maximum scope of eye movement in visual perception. This young art has a dynamic force, although derived from static material and unlike other arts is capable of full exploitation. The force is so dynamic that it is not easy to subjugate it in the service of man. Because of the nature of this impact, the problem of the children seeing the film has assumed great importance. Children see film with uncritical, submissive and passive ego, ready to receive any impression from the outside world. This has been a cause of worry to educationists, parents and social workers alike.

Educationists are, therefore, trying their best to raise the critical standards of children and to sharpen their tastes for films. The following two points differentiate the art of film appreciation from the appreciation of other art, which make it essential for the introduction of film appreciation in Secondary schools :

1. The film unlike other arts is seen by a group of some size and is never seen by an individual alone. So its impact on the individual is that of a group or crowd. It is a matter of common knowledge to psychologists that a man, while working in a group, thinks, works and acts emotionally, rather than intellectually; the critical faculties very often, do not function. This impact of the cinema on an individual would be far less if it was possible for man to see films individually. T. V. film in this respect will have comparatively less influence.
2. Eisenstein once said that the study of man's behaviour and particularly his methods of perceiving reality, will always be our determinant and according to him, film-editing is the reconstruction of the thought process. In course of our daily life the environment plays a vital role. It impinges on our consciousness and interacts with mental forces built up from past experiences. In exactly the same manner we receive the subjective and objective impression of life from films and our consciousness during some films can be like discriminative experience during the course of dreaming. It is because of this that there is likeness between thought and film. Added to this, the following two fundamental principles of film production are correlated with our thought process and they bring it nearer to our life than other arts :—

(a) Illusion of reality in the elements :

This can be regarded as quantitative and can exist in varying degrees. It also provides a threshold; when the strength of illusion reaches a certain strength, we have the reality of thought.

(b) Ease of change of elements :

This refers to the general fluidity of the medium and the flexibility of the changes which range from the most violent to those of dissolving views, like thought-process.

The effect of the film is heightened the more, because we see the whole drama of life before our very eyes over the screen in a couple of hours.

Some sociologists have adopted a combative attitude to the proven influence of the cinema on young people. After documenting the emotional and intellectual effect of the film on the child, they urge strict censorship and compulsory protection of children from the impact of screen. In contrast to them, the psychologists say that the cinema offers an opportunity for resolving the social conflicts and provides an outlet for anti-social tendencies. Such tightening of control over censorship can hardly give the desired results, because censorship at its best is only a negative force which can stop the occasional outrages of films, but is not a lasting solution of the problem of the child and the cinema. It is hoped that the encouragement of the aesthetic and social standard, sharpening of critical senses and a proper study of films will have a lasting effect and will provide an unshakeable shield against the emotional impact of the cinema on the child and especially the adolescent.

Film Appreciation : what is it ?

The only country which has successfully tackled the problem of child and cinema and is a pioneer in this field is the United Kingdom. In 1946, educationists in Britain realized that a remarkably high proportion of people who gather nightly at the cinemas of the world, consists of children and young people, and to solve the problem a departmental committee on children was set up in 1947, and its report was published in 1950. The report said that the presentation of false human values 'is more pervasive and dangerous than the depiction of crime or impropriety on the screen'. The committee further added that 'no kind of classification or prohibition is likely to make much difference to the problem. Only a more discriminating public will reduce the demand for this kind of skilfully contrived rubbish'. One of the recommendations of the committee was to give the children 'some specific training in film appreciation, either in or out of school but certainly as a part of general educational process'. D.W. Griffiths' once said, "My object is to teach you to see." It is 'seeing' in Griffiths' sense, that is the main objective of film appreciation.

Definition and Scope :

“Film appreciation,” according to Stanley Reed, Film Appreciation Officer to the British Film Institute, “aims to encourage in young people habits of greater discrimination in the selection of films, and endeavours to help them to achieve some modest critical standard by which to assess the quality of films seen ; by thus seeking to eradicate the habit of passive viewing, it hopes to fortify the child and the adolescent against the emotional impact of undesirable or meretricious films and to heighten the enjoyment of what is good.”

Film appreciation does not mean that we want to produce a nation of film critics. It only seeks to sharpen the critical judgment of an average child and to help him in the selection of his programme. Film appreciation—now termed as film study—has thus a two-fold purpose. Firstly, it will equip the child to discriminate in seeing the films. Secondly, it will help in raising the standard of film production as only an enlightened public will demand intelligent films, a cinema of more intelligent content and greater variety of style and better acting and intelligent direction.

Study of Films and School Curriculum

Another related question is how to integrate the study of films in the normal curriculum of secondary schools. There are those who advocate its place in the cultural activities of the school, while others insist on giving it a specific place in the school time-table. In the United Kingdom, in many schools it is undertaken as a part of extra-curricular activities while in some schools it has reached an advanced experimental stage and has already become an integral part of school curriculum and quite a good number of experimental films have thus been produced. In India, we can start it as an integral part of school education, because of the increasing number of unhealthy films that are being produced and shown to the school-going children. The first essential of this ambitious programme of film teaching is a band of enthusiastic teachers who could take up the work seriously and could shake the traditional superstitious attitude towards the cinema. The most essential qualification for a film teacher is genuine interest in films. He should be an enthusiastic film-goer, and eager to convey to children his own love of films. As in all cultural subjects, the attitude of the teacher is of prime importance. He must be ready to create the ‘film-sense’ in the pupils, being himself a lover of films.

Films for Children

An attempt to solve the problem of the child and the cinema was made in Britain during the war by a private firm, namely, J. Arthur Rank Organisation who started the production of children’s entertainment films—full-length as well as shorts. These films were screened at Saturday Matinees and thousands of

children attended it. Unfortunately, the flow of production could not be continued and the programme had to be abandoned. A film completely cast by teen-agers would provide a better screen for children to identify themselves completely with character and action. This habit of identification often persists, though in lesser degree, when we grow older.

It was not long before it was realised that the attraction of children's entertainment films is not strong enough to counteract the powerful influence of the adult cinema and in spite of the fact the hundreds of children's filmshows were arranged every week in Britain, it has been found that the majority of films seen by an average child, are still the commercial films and that long before the children leave school, they tend to look down upon juvenile entertainment. In India we have only made a small beginning in the field. Only a year back a Children's Film Society was set up for the purpose of popularising the screening of suitable films for children and encouraging the production of children's films. The Society so far has produced a noted film *Four Brothers* and adapted certain features in a suitable manner.

Teaching children to discriminate between good and bad Films :

Special films for children have only a limited effect and cannot offer full and complete solution of the problem of the child and the cinema. The solution lies in paying greater attention to teaching children how to appreciate good films than providing special films. There, perhaps, is no greater protection for a child against the harmful effect of the adult cinema than the ability to discriminate between a good and a bad film and so enjoy the film intelligently so that he remains unaffected by the presentation of false values of life in the adult cinema.

The problem of starting film study in the secondary school is still at an experimental stage. There is no accepted methodology of teaching and the whole work is carried on through the simple experience of the teacher who will ultimately decide the course of teaching film appreciation. Nothing can bring home the structural components of the film better than the making of a simple film by the pupils themselves from their own script. This process, indeed, has its own financial problem, yet it is being successfully tried in some schools in Britain. The knowledge of the mechanics of films to be studied is a precondition for acquiring an appreciation of camera work, lighting, direction, and acting. This is perhaps most important in changing the attitude towards feature films. There are others who advocate a middle path and say that the conception of film study in discussing camera angles, montage, and sound effects is just false. What is required is that film study should encourage discrimination in the children in the choice of their programme. The position in India is quite different. We do not have schools possessing projectors and if there are a few having facilities; there are hardly any sources from which good films can

be borrowed. A compromise between the two courses will, perhaps, be ideal. The whole system requires a graduated approach to the problem.

The following points are suggested for developing film appreciation in Secondary schools :—

1. Each city or town should form a society of film teachers of various schools and should meet at a common place to utilize the projector of any one of the schools. The society should screen films for its members.
2. The local cinema will provide the text for the week. This will even encourage schools without a projector to make a start in film study. Further, this means a greater correlation between the school and outside school activities of a child.
3. Maintenance of a film chart in each school, giving short reviews from various critics to help the students to make a selection of the programmes. This will activate their interest in films as well as help them to discriminate about the choice of the programme.
4. The class discussion on local releases will help much in creating film-sense in children. This will also help them to know that the basic terms of film criticism and discussion could also relate to the merit of the story, director and actors.
5. Each school should keep a small collection of books and periodicals on films. Special articles and lesson books may be prepared by the film teacher for the guidance of the pupil.
6. Advanced students may be given an idea of certain fundamental techniques in film production and about the development of the cinema including screening of some pre-1920 films.
7. An idea of the different schools of thought and the brief history of the directors in Indian film industry will help the students to discriminate between various film productions.

Some Recommendations

1. The Government of India should start some refresher courses for the benefit of teachers in service to help them to start film study in their schools.
2. An educational publication on the monthly feature releases may be started by the Government of India for the guidance of film teachers.
3. Some of the schools should start film appreciation through film production as an experimental project on behalf of the Government of India.

PRACTICAL TIPS FOR FILM TEACHERS IN FILM APPRECIATION

P. D. Khera

The primary object of film appreciation is to help the child to discriminate between the realities of life and fantasies of the film world. As a generation of school-going children are beginning to learn impressions from the screen, every film teacher must strengthen a child to such a degree that he can encounter the 'make-believe' world of cinema successfully.

Each film appreciation class should be started with a lesson on the history and development of cinematography. In this connection Common Ground film-strip *The Invention of Kinematography* which traced the development of cinema since 1828, will be useful in understanding subject. The British Films Institute film *Beginning of the Cinema* is equally important. It includes a representative selection of films between 1896 and 1900, comprising *A Train Entering a Station* from Paul's film of the *Derby* 1896 ; *The Brighton Fire* ; *Panorama of Calcutta*, etc.

The following points should be borne in mind during film study and should be thoroughly discussed in the class with the students :

1. The director is the most important person in the production of the film and the success of the film rests primarily with him. A genius of a director may triumph over a host of difficulties, while the best actor and good technicians will not help to make a good film. He must visualize the whole film in advance. The dynamic personality of the director will even change the trends of the film. Hence, a brief discussion on the life and artistic capabilities of the director will be a useful guide to children in the selection of the films.
2. The next in importance is the scenario in which begins the progress of the film from words to picture. The visual aspects, the most important in the film, depend on a imaginative scenario. The unity and continuity of the theme is essential for a satisfactory film. All irrelevant incidents should be noticed carefully. This is a drawback in a good production and a failure of the director's imagination. The Indian film *Shri 420* is a typical example of unnecessary shots. Its length could well be reduced and still a well knit theme be maintained. The balance of long shots, close-ups—spatial and temporal, montages and compositions, will go a long way in turning out a good film. All these may be discussed point by point in the class or in the auditorium.

3. *Camera work and sound effects* : The best film speaks visually and is not dependent on the sound. *Pather Panchali* is an example in view. The sound can always help to create the required dramatic effect where required—in the film *The Living Desert*, the sequence scorpions, the sound montage has helped to enhance the visual effect of the scene. Such an intelligent use of sound to supplement visual effects is a quality of good film while a sound hampering the visual effect is a defect. In photography, it is necessary to keep a proper balance of light ; it is equally important to keep an acoustic balance. A definite relation must be maintained between the sound and sight to achieve better effects.
4. *Editing* : The ultimate shape of the film depends on imaginative editing. It is the dynamic cutting which will create the proper synthesis in the various components of the film. How the director creates a particular effect depends on the sharpness of the cutting. The cutting in the Odessa stairs in Eisenstein's film *Battleship Potemkin* is perhaps excellent and has created the proper effect.

The 'film as a whole' is the ultimate basis of criticism and must be treated as a superior entity. It is the overall view that will ultimately decide the quality of the film. The spectator, of course, will watch critically all the three points—sight, sound and rhythm of cutting—before appreciating a film as a whole.

FILM APPRECIATION FOR SCHOOLS

Homai Jal Moos

The Union Ministry of Education deserves special congratulations for having introduced this new topic "Film Appreciation for Schools" into the programme.

The cinema has been described, by no means incorrectly, as the most important medium for the diffusion of human thought since the 15th century discovery of the printing press. The appeal of moving pictures is universal.

Thus, to take the analogy of the printing press, it is clear that just as books are not confined to novels of varying values, so the forms of filmic expression can (and should) be many and diverse. Conditioned as we are to the film novel or novelette, we tend to forget the possibilities and indeed the existence of film poems, film treatises, film reports, film textbooks and lectures, film sermons, film geographies and film anthologies.

What Criteria are used in Evaluating Films ?

Let me read out to you from page 246-247 of "Educational Screen" Summer 1953-54 : *Film Evaluation*, it is true, has developed indigenously. Yet essentially the same evaluative criteria are being used by the universities and, it is thought, are being and can be used by other agencies building libraries and by teachers interested in critically appraising the value of the films they are using. It should be noted, however, that all the criteria do not pertain to all films in the same degree. Each film is unique and calls for a specific frame of reference and evaluation. The criteria include :

I. Psychological factors

1. Is the film conducive to audience identification and ego-involvement ?
2. Does the film provide a set which will give direction to behaviour and provide incentives which individuals will strive to attain ?
3. Is the main idea in the film developed in a constellation of ideas which interact ?
4. Does the film provide for audience participation covert as well as overt ?
5. Does the film stimulate interest ?

II. Technical factors

1. Is the photographic quality sufficiently satisfactory to enable the audience to see the photographic symbols without undue concentration on the process of seeing ?
2. Is the sound easily intelligible ?
3. Are adequate orientational devices used ?
4. Is the type of pictorial representation appropriate for the presentation of the main ideas in the film ?
5. Does the type of sound accompaniment make the greatest possible contribution to developing the explanation and providing emotional tone for the ideas ?

III. Content factors

1. Is the solution to the problem, the development of certain mental and personality behaviours, and/or the acquisition of skills adequately developed ?
2. Are categorical representations sufficiently supported by differentiating details so that those in the audience will not base their generalizations on stereotypes ?

3. Are any misconceptions likely to be formed because of over-condensation ?
4. Are there any serious omissions in the content ?
5. How effective are the positive or negative examples ?
6. Is the treatment of content effective in terms of the purposes of the film ?
7. Are the range of material and the range of appeal to maturity level compatible with using the film on a given grade level for a specified purpose ?

IV. General factors

1. Do the component parts of the motion picture complement and supplement each other in such a fashion as to result in a film which gives a total impression of unity and a satisfactory synthesis ?
2. Does the film serve a socially desirable and educationally important purpose ?

Adapted feature films : The T.F.C.

The organisation known as T.F.C. (Teaching Film Custodians) has made available on a non-profit basis condensed 16 mm. versions of a number of Hollywood films : *The Good Earth*, *Servant of the People*, *Life of Emile Zola*. etc. Because they represent varied types of films, these are suggested as a basis for a curriculum unit in discrimination.

Once feature films have had their regular runs in theatres, it is possible to obtain them at relatively low rental rates for use in schools and colleges.

A Committee of the National Council of Teachers of English, headed by Marion C. Sheridan of the New Heaven High School, has developed the film *Understanding Movies* to serve in the study of motion-picture appreciation. This film contains sequences illustrating excellence in direction, acting, photography, editing, and art music. An excerpt from *Tennessee Johnson*, showing Jefferson Davis declaring Southern secession in the Senate, demonstrates good direction, one from *The Good Earth*, featuring Luise Rainer and Paul Muni, illustrates fine acting ; a passage from *Treasure Island* demonstrates beautiful photography ; a sequence from *David Copperfield* provides an example of effective film editing ; and the concluding unit from *Romeo and Juliet* illustrates the work of the motion picture art and music directors.

Enabling students to select movies intelligently

- (1) Do the students keep a movie diary and share judgments once a month in the classroom with all participating ?

- (2) Paste on the bulletin board some excellent reviews by thoughtful critics. With clippings from newspapers and similar sources the class can discuss the comparative merits of the reviews as well as the films. When we spend hundreds of hours in helping students select books and articles for reading, why do we devote so little time to helping them select their movies?

Excellent foreign films are made available on many campuses and in art museums and libraries of progressive countries of the world. We may also expect that programmes of film classics will eventually be made an organised part of University and School programmes. Basic Wright says, "We cannot know everything all the time. But universal knowledge—the Wellsian world-brain—is not beyond our realisation. And the film, with all its cogency and clarity, can be everywhere all the time".

Some Study Materials and Sources of Supply Books

- (1) Benoit—Levy, Jean Albert, *The Art of the Motion Pictures*. Coward McCann, 1946.
- (2) Roger Manvell, *The Film and The Public*. Penguin Books. Revised edition 1955.

Films

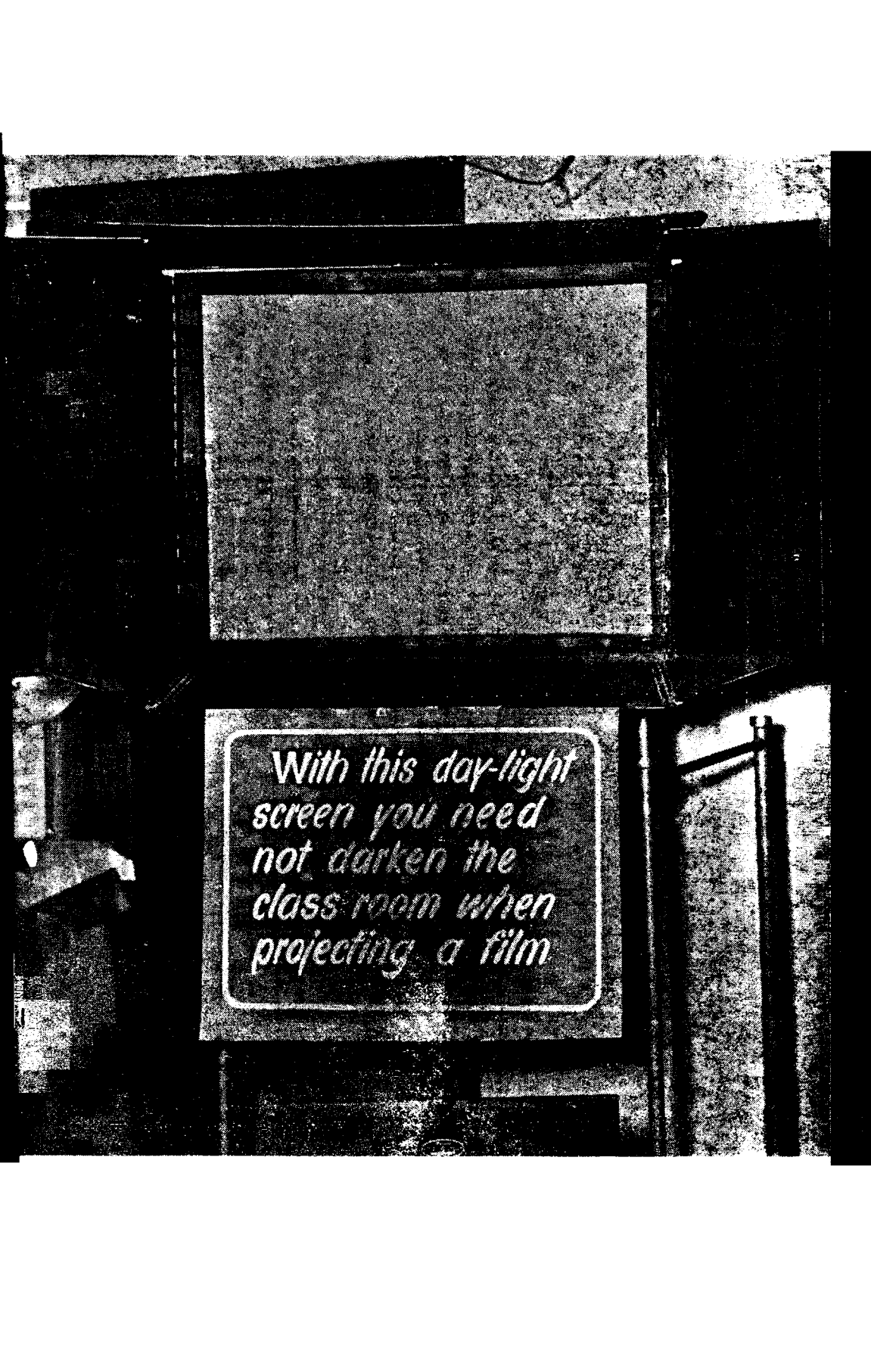
- (1) *Film and You, The* (20 minutes, Sound, Black and White, National Film Board of Canada, 1948) shows how Canadian film councils are organized and what a film council can do for the community.
- (2) *Understanding Movies*, (17 minutes, Sound, Black and White, Teaching Film Custodians, 1951). sequences illustrate excellence in directing, acting, photography, editing, art, and music.

APPENDIX F

THE EXHIBITION

An Exhibition of audio-visual aids and equipment was organized at the Central Institute of Education, Delhi during the days of the Conference. The purpose of the Exhibition was to acquaint the delegates and visitors with the various audio-visual aids being used in the classrooms in India and abroad.

The Exhibition comprised the following sections: projected or optical section, aural section, graphic section, relief section and miscellaneous section



*With this day-light
screen you need
not darken the
class room when
projecting a film*

Books and periodicals of audio-visual education were also displayed. Local dealers of audio-visual aids and equipment set up their stalls at the Central Institute of Education as a part of the Exhibition.

The following booklets on the various topics of audio-visual education were distributed among the delegates :

1. How to motivate, teach and train.
2. How to make puppets.
3. Flannelgraph.
4. Printing by Silk-screen.

The following material was specially prepared for the distribution at the Exhibition :

1. A list of select books on audio-visual education. (Annexure (a)).
2. A list of periodicals on audio-visual education. (Annexure (b)).
3. 'Mr. Tape-recorder introduces himself'—a feature explaining the use of a tape-recorder and giving instructions for its proper use. (Annexure (c)).

ANNEXURE (a)

I. Audio-Visual Aids in Fundamental Education.

1. Brinson : Choice and care of films in fundamental education.
Film Centre, London, 1950.
2. Hughes and Sinclair : The Film and fundamental education.
Film Centre, London, 1950.
3. Visual aids in fundamental education, some personal experience.
Unesco, Paris, 1952.

II: Audio-Visual Aids in Special Teaching Situations

1. Cons : Geography and visual education.
Royal Geographical Society, London.
2. Heaton : Geographyroom in a Secondary school.
Geographical Association, Sheffield . 1954.
3. Knowlton and Tilton : Motion pictures in history teaching.
Yale University Press, Yale. 1929.

III. Audio-Visual

1. Dale : Audio-Visual methods in teaching.
Dryden Press, New York, 1948.
2. East : Display for learning.
Dryden Press, London, 1952.
3. Hass and Packer : Preparation and use of audio-visual aids.
Prentice-Hall, New York, 1952.
4. Kinder : Audio-visual materials and techniques.
American Book Co., New York, 1950.
5. McKown and Roberts : Audio-visual aids to instruction.
McGraw-Hill, London, 1940.
6. Sumner : Visual methods in education.
Blackwell, Oxford.
7. Weaver and Bollinger : Visual aids, their construction and use.
Nostrand, London, 1950.

IV. Children's Films

1. Bauchard : The child audience.
Unesco, Paris, 1952.
2. Strock : The entertainment film for juvenile audiences.
Unesco, Paris, 1950.

V. Documentary

1. Hardy : Grierson on documentary.
Collings, London, 1946.
2. Rotha : Documentary Film.
Faber, London, 1952.

VI. Films

1. Dale : Motion pictures in education.
Wilson Co., New York, 1938.
2. Devereux : The educational talking picture,
Chicago University, Chicago, 1935.
3. Horne : Cinema in education,
Strand, Effingham, n.d.
4. Ottley : The cinema in education
Routledge, London, 1935.

VII. Film Appreciation

1. Eisenstein : The film sense.
Faber, London, 1947.

2. Manvell : Film,
Penguin Books, Middlesex, 1946.
3. Wright : The use of films.
Bodley, London, 1948.

VIII. Filmstrips and Slides

1. Green : Making and using filmstrips.
Pitman, London, 1950.
2. Hamilton : The stereograph and the lantern slide in education. Keystone View Co., Meadville, Panna. 1946.
3. Saunders : Filmstrip hand book for India.
Christian Literature Society, Madras, 1954.

IX. History of Film and Film Criticism.

1. Bardeche and Brasillach : History of the film.
Allen and Unwin, London 1945.
2. Pudovkin : Film technique and film acting.
Vision Press, London, 1955.
3. Quigley : New Screen techniques.
Quigley. N.Y., 1953.
4. Shah : Indian film.
Motion Picture Society of India, Bombay, 1950.

X. Museums

1. Basak : A plea for educational museums.
Basak, Calcutta, 1937.
2. Basak : Necessity of educational museums.
Basak, Calcutta, 1938.

XI. Photography.

1. Boer : The complete amateur photographer.
Iliffe, London, 1954.
2. Coote : Making colour prints.
Studio, London, 1949.

XII. Planning of Audio-visual Programmes

1. Audio-Visual Education Association of California : Setting up your audio-visual education programme.
Stanford University Press, California. 1950.

2. **NCVAE :** Planning a visual education policy.
The National Committee for Visual-Aids in Education, London 1948.
3. **Seaton :** A measure for audio-visual programmes in schools. (American Council on Education Studies).
American Council on Education, Washington, 1946.

XIII. Projection.

1. **Atkinson :** Practical projection for teachers.
Current Affairs, London, 1948.
2. **Campbell and others :** Sound-film projection.
Newness, London, 1949.
3. **Kidd and Long :** Filmstrip and slide projection.
The Focal Press, London, 1949.
4. **Noel :** Projecting motion pictures in the classroom.
American Council on Education, Washington, 1940.

XIV. Radio and gramophone

1. **Beidler-Wagner :** - - The educational role of broadcasting. -
Internation Institute of Intellectual Cooperation, Paris, 1935.
2. **Clause :** Education by radio—school broadcast.
Unesco, Paris, 1949.
3. **Johnson :** The gramophone in education.
Pitman, London, 1936.
4. **Radio in fundamental education :** Unesco, Paris.
5. **Robinson :** Broadcasting and a changing civilization.
Bodley, London, 1935.
6. **Tyler** Radio as a cultural agency.
National Committee on Education by Radio, Washington, 1934.

ALL-INDIA TEACHERS' CONFERENCE
ON AUDIO-VISUAL EDUCATION (JULY : 1956)

Periodicals and journals on audio-visual education listed below should prove useful to all interested in audio-visual methods and techniques. The first two items in the list would be of particular interest to teachers.

- | | | | |
|---------------------------|--|--|-----------------------------------|
| 1. Visual Educa-
tion | Published by the National Committee, for visual Aids in Education, 33, Queen Anne Street, London. W 1. | Issues every month Includes articles on various aspects of audio-visual education- al films and filmstrips. | Annual subscription 14 shillings. |
| 2. Look & Listen | Available from 45, Dorset Street, London W. 1. | Issues every month, Contents as of (1) above. | Annual subscription £1. |
| 3. Sight & Sound | Published by the British Film Institute, 164, Shaftesbury Avenue, London w.c. 2. | An outstanding journal devoted to the cinema. Reviews current film releases all over the world. features and critical articles on the development of cinema and the work of outstanding directors, contributed by experts. | Annual subscription 15 shillings. |
| 4. Educational Screen | Published by Educational Screen Inc., Barrington, Illinois (U.S A.) | Issues monthly except in July and August. Contents as on of (1) above. | Annual subscription 5 dollars. |
| 5. Audio Visual Guide. | Available from 1630, Springfield Avenue, Maplewood, New Jersey, U.S.A. | Issues monthly except in June, July and August. Contents as of (1) above. | Annual subscription 4.50 dollars. |
| 6. Monthly Film Bulletin. | Published by The British Film Institute, 164, Shaftesbury Avenue, London. w.c.2. | Gives reviews of all films released in United Kingdom over a month and passed and certified by the British Board of Film Censors for public exhibition. | Price per copy two shillings. |

ANNEXURE (c)

MR. TAPE RECORDER INTRODUCES HIMSELF

H. S. Bhole

Hullo Visitors : How do you do ? Please stay here a while as I introduce myself to you. I am Mr. Tape Recorder. You seem to be all teachers and educationists and we can surely talk of things of common interest. I know people don't like things too costly and complex. That is why I choose to be simple, compact, moderately priced and almost fool-proof. You could learn to operate me after a single demonstration. I am not a very delicate thing but I am a machine after all and you have got to handle me with care.

Now have you noticed my tongue as I was talking ? I have a long tongue as you can see. I can have on it a recording of six to eight hours. Then it could be of plastic, or of paper or it could be metallic. It could go on indefinitely without deterioration. And you could use it over and over again by erasing the earlier sound track. If it tears, you can repair it with scotch-tape—such a simple operation.

It is embarrassing to go on talking about oneself, but how could you know me otherwise ? Believe me, I am a very useful teaching tool. In many progressive countries they have come to appreciate my services and an increasing use is being made of me in the classroom. I like children and I like to help them learn.

There is something special I can do which you by yourself could never do. For example, but for my help you could never hear your own voice as others hear it. And from this very fact spring many of the uses which are associated with me, i.e. in the teaching of speech-work, pronunciation, music, etc.

I know of a boy who spoke too fast to be understood and he would not believe when he was told that he spoke so. I set him right. His voice was recorded and when he heard himself as he had spoken he said, "Do I really talk that fast !" I have cured many people of their inaccurate speech. I have relieved others of their mannerisms. I have a good sense of humour too. Once I recorded the voice of a teacher and I said, "I mean, I mean, I mean," as many times as he himself had used it. He felt so ashamed of it that he never used 'I mean' again even when he ought to have used it. To many I have said that they mispronounce their vowels, that their speech is inarticulate, that they should learn to speak and pronounce better.

This reminds me of another boy, who really could speak well but was too shy to speak in the classroom. I once made him hear himself. He felt exhilarated and found a new confidence in himself.

I will tell you another interesting incident. I am reminded of a Professor of Education in a University in Australia who so often told his two young children not to quarrel but the children never would listen to him. Once as they were quarrelling, he recorded on me all that had passed between them with the cries and shouts and kicks—all intact. And later he let them listen to what they had said. Oh, the sight of them! They were so ashamed, I never found them quarrelling again as long as I stayed with them, at least not that awfully.

If you permit me to talk a little more about myself, I will tell you that I have been used in very many interesting ways in the classroom. I have been used in the teaching of foreign languages; I have been used for teaching music, both vocal and instrumental and also in teaching music appreciation. I have made poetry and play-reading so very interesting for children. I have been used in the school dramatics for sound effects.

But you can create such a mess for yourself if you are not careful. I know once a teacher wanted the chirping of the birds in a play his students were staging and there came instead from the mike the barking of a dog. The whole lay was spoiled, and for half an hour there would be no silence in the hall. Not my fault anyway.

I can bring you and the children in your class lectures by eminent scholars from great distances, speeches by great leaders and politicians, and inspiring talks of philosophers. And I can sing you beautiful songs.....

In the States, they do interesting things with me. You send your tape to the library and you get back the lecture or the lesson that you may want for your class. They call it a library of tape-records.

I am sure you will find me an amiable fellow and I like to be friendly with every teacher. But, really, no taking of liberties with me. Use me as a teaching tool, as an instrument but not as a novelty or a toy. For then you will not only waste your own time but also that of your students. Prepare your lesson plan and then use me suitably, otherwise I had better remain out of your classroom.

That is all. Thank you.

APPENDIX 'G'

OFFICE BEARERS OF THE CONFERENCE

Director

S. Sohan Singh,
Assistant Educational Adviser to Government,
Ministry of Education.

Rapporteur

Shri P.D. Khera,
Technical Assistant,
Audio-Visual Aids Section,
Ministry of Education

Group Leaders

Shri H.P. Kulshreshtha (Himachal Pradesh)
Mrs. H.J. Moos (Bombay)
Shri S.N. Srivastava (Bihar)
Shri G. Reñu (Mýsoñe)

Administrator

Shri H.S. Bhola,
Research Assistant,
Audio-Visual Aids Section,
Ministry of Education.

APPENDIX 'H'

NAMES AND ADDRESSES OF DELEGATES

Assam

1. Shri Sitangsu Mohon Majumdar,
Sub-Inspector of Schools,
P.O. Silchar (Assam).
2. Shri Dharmadutta Sarma,
Special Officer,

Social Education (Assam),
P.O. Gauhati (Assam).

3. Shri Bidyadhar Sharma,
Science Teacher,
Normal School, Jorhat.
4. Shri Surendra Nath Das,
Assistant Headmaster,
C.C. School,
P.O. Gauhati (Assam).

Bihar

5. Mrs. Gouri Chakaravarty,
Lady Instructor,
Social Workers' Training Institute,
P.O. Waini, District Darbhanga (Bihar)
6. Shri S.N. Prasad,
Chief Instructor,
Demonstration-cum-Training Unit,
Janata College, Turki.
7. Shri Sceta Prasad,
Instructor,
Social Workers' Training Institute,
Turki, P.O. Turki,
Dist. Muzaffarpur (Bihar)
8. Shri Bhagwan Prasad Sharma,
Chief Instructor,
Social Workers' Training Institute.
Pindrajora,
District Manbhum, (Bihar).
9. Shri S.N. Srivastava,
Officer-in-charge,
Audio-Visual Education,
Janata College, Turki (Bihar).

Bombay

10. Kumari Maina K. Gadgil,
Assistant Teacher,
S.N.D.T. Kanyashala,
510, Shanwar, Poona-2.

11. G. V. Tagare,
S.M.T.T. College,
Kohlapur (Bombay).
12. Shri V.M. Sabnis,
Assistant Deputy Educational Inspector for Physical Education,
Greater Bombay,
Bombay.
13. Shri J.J. Patel,
Assistant Instructor,
University Experimental School,
Baroda.
14. Mrs. J.A. Moos,—Expert,
St. Xavier's Institute of Education,
St. Xavier's College,
Bombay-I.

Delhi.

15. Prithvi Nath Malla,
Assistant Social Education Officer,
Directorate of Education,
Delhi.
16. Shri K.D. Ahuja,
Headmaster,
Government Industrial School,
Delhi.
17. Shri Shiva Kumar Ojha,
Assistant District Inspector of Schools,
Directorate of Education,
Delhi.
18. Shri Bhagwan Chand Sharma,
Assistant Teacher,
Government Senior Basic School,
Village Shakurpur,
P.O. Shakurbasti (Delhi).

Himachal Pradesh :

19. Shri H.P. Kulserashta,
Audio-Visual Education Officer,
Himachal Pradesh,
Himachal Dham, SIMLA.

Jammu and Kashmir :

20. Shri J.N. Mattu,
T.T. College,
Srinagar.

Madhya Bharat :

21. Shri Vinodi Lal Saxena,
Assistant Teacher,
Maharajahada Vidyalaya,
Lashkar (M. B.)
22. Shri S.N. Babar,
Junior Professor,
Post-Graduate Government Teachers' College,
Dewas (Madhya Bharat)
23. Mrs. Kanti Mahalwal,
Headmistress,
Government Girls' High School,
Morar, Gwalior (Madhya Bharat)

Madhya Pradesh :

24. Shri S.M. Hasan,
Assistant Master,
Government Multipurpose Higher Secondary School,
Khandwa (M.P.)
25. Kale Laxman Deorao,
Assistant. Master,
Government Multipurpose Higher Secondary School,
Amarwati (M.P.)
26. Mahesh Chandra Bose,
Lecturer in Physics,
Government Multipurpose Higher Secondary School,
Bilaspur (M.P.)
27. Shri J.Wycliffe,
District Librarian,
Sagar, (M.P.)
28. Shri Liladhar Damohe,
District Librarian,
Raipur (Madhya Pradesh).
29. Shri M.T. Kashedikar,

District Librarian,
Buldana, (M.P.)

30. Shri K.A. Kulkarni,
Lecturer,
Government Patwardhan Multipurpose
Higher Secondary School,
Nagpur (M.P.)
31. Shri M. S. Inamdar,
Lecturer,
Multipurpose Higher Secondary School,
Bhandara (M.P.)

Madras :

32. Shri M. Vivekananda,
Headmaster,
The Madras Progressive Union High School,
Madras.
33. Miss K. Jegathambal,
Lecturer,
Lady Willingdon Training College,
Triplicane,
Madras-5.

Orissa :

34. Shri Ashutosh Kar,
Assistant Teacher,
Balasore Zilla School,
Balasore (Orissa).
35. Shri Ogadhu Misra,
Assistant Teacher,
Government Secondary Training School for Men,
Barhanpur, Ganjam (Orissa).
36. Shri Dinabandhu Mohapatra,
Assistant Master,
Angul High (Govt.) School,
P.O. Angul,
Dt. Dhenkanal, (Orissa).
37. Shri Kahnucharan Mahanty,
Assistant Teacher,
Government Secondary Training School,
Cuttack-2.

38. Shri B.N. Murty,
Assistant Master,
Ravenshaw Collegiate School,
Cuttack.

Panjab :

39. Shri J.R. Iechpunani,
Headmaster,
Government Basic Training School,
Jagraon (Dist. Ludhiana).
40. Shri S.S. Bhatia,
Lecturer,
Government Training College,
Jullundur.
41. Shri Kulwant Singh,
Lecturer,
Government Training College,
Jullundur.

Pepsu :

42. Shri R.S. Bhalla,
Science Master,
Raj High School,
Sangrur (Pepsu)
43. Shri K.L. Bhatia,
Assistant Inspector of Schools,
Rajpura, Dist. Patiala.
44. Shri Ram Sarup Sud,
State High School,
Nabha.

Pondicherry :

45. Shri Coomarassamy Visvanadavattiar,
Professeur-adjoint College, Caive Pondicherry,
35, Komutty Street,
Pondicherry.

Rajasthan :

46. Shri Hanuman Prasad Surolia,
Headmaster,
Fort High School,
Bikaner (Rajasthan).

47. Shrimati Raj Sehgal,
Maharani Girls High School,
Bundi (Rajasthan).
48. Shri Behari Lal,
Headmaster,
Government Multipurpose Higher Secondary School,
Jodhpur.

Saurashtra :

49. Shri V.C. Bhatt,
Deputy Educational Inspector,
Directorate of Education,
Government of Saurashtra,
Rajkot.

Tripura :

50. Duga Prasanna Dey,
Assistant Teacher,
Uma Kanta Academy,
Agartala (Tripura).
51. Shri Sunil Kanti Chakravarti,
Assistant Teacher,
Bodhjung Government High School,
Agartala (Tripura).

Uttar Pradesh :

52. Shri Dev Dutta Bhargava,
Government Central Pedagogical Institute,
Allahabad.
53. Shri Jagmohan Krishna Saxena,
Assistant Master,
Government Higher Secondary School,
Hastinapur, Distt. Meerut.
54. Shri V.S. Bhatnagar,
Assistant Master,
Government Intermediate College,
Allahabad.
55. Mrs. Radha Rani Shrivastava,
Art Mistress,
Government Girls' Normal School,
Allahabad.
56. Kumari Kamala Roy,

Lecturer,
Government Training College for Women,
Lucknow.

West Bengal :

577. Shri Rakhai Dasgupta,
Assistant Master,
Balligunge Government High School,
38/2 Beltola Road, Calcutta-20,
West Bengal.
58. Shri Gostha Bihari Chatterji,
Assistant Master,
Barasat Government High School,
24 Paraganas, West Bengal.
59. Shrimati Prativa Dasgupta,
Assistant Teacher,
Bethune Collegiate School,
181 Cornwallis Street,
Calcutta-6.
60. Mrs. Anjali Chatterji,
Headmistress,
Shibpur Bhubani Balika Vidyalaya,
P.O. Shibpur, Howrah.
61. Shri P.B. Chakravartty,
Assistant Master,
Hare School,
Calcutta.

Andhra :

62. Shri G.F.B. Arthur,
Municipal High School,
Kurnool.
63. Shri D. Rajamuniswamy Naidu,
Headmaster,
Kannan High School,
Chittoor (Andhra).
64. Shri A. Albert,
Assistant,
A.B.M. High School,
Ongole (Andhra).

65. Shri S.D. Hussaini,
Government Urdu High School,
Kurnool.
66. Shri P. Nagabhushana Rao,
Assistant,
Government P.R.C. School,
Kakinada (Andhra).

Manipur

67. Shri Ibungotombi Singh,
Government Tamphasana Girls' High School,
Imphal.
68. Shri T. Ibotombi Singha,
Government Chaoyaima High School,
P.O. Thoubal (Manipur).

Mysore :

69. Shri G. Renu,
Officer for Audio-Visual Education,
New Public Offices,
Bangalore.
70. Mrs. Ambu G. Tagat,
Assistant Mistress,
Vani Vilas Institute,
Fort, Bangalore City.
71. Shri H. R. Raghavendra Rao,
Assistant Master,
Government Central High School,
Bangalore.

Hyderabad :

72. Shri K.R. Deshpande,
Lecturer,
B.Ed. College,
Aurangabad.
73. Shri B. Shantappa,
Lecturer,
B.Ed. College,
Gulbarga. (Hyderabad State)

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