MEDIA MESSAGE

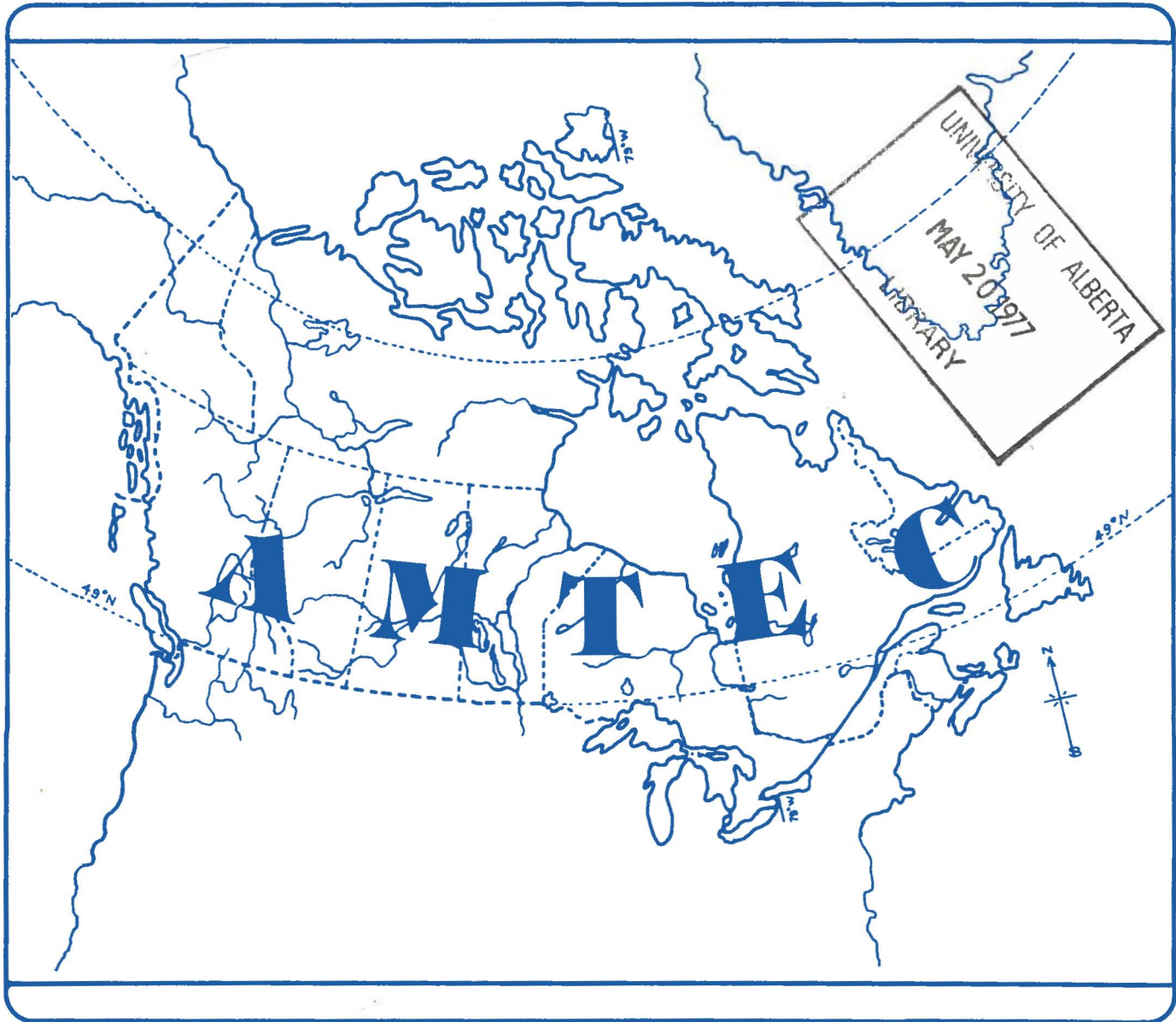## FALL, 1976

VOL. 6 NO. 1

L'ASSOCIATION des MEDIA et de la TECHNOLOGIE en EDUCATION au CANADA
ASSOCIATION for MEDIA and TECHNOLOGY in EDUCATION in CANADA

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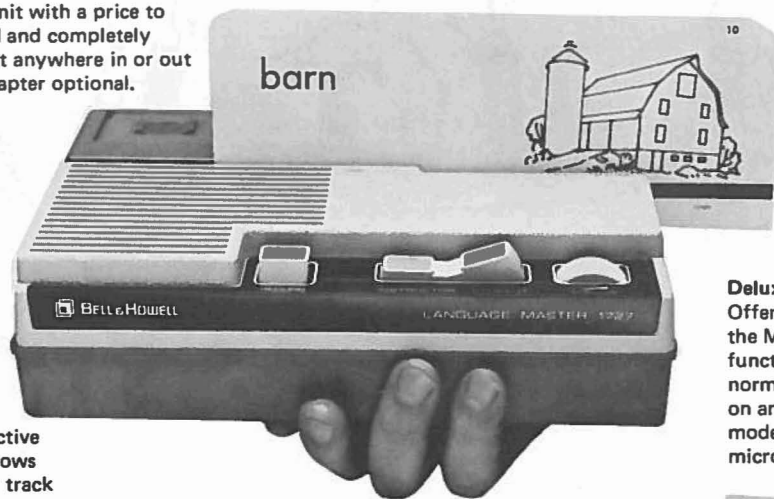
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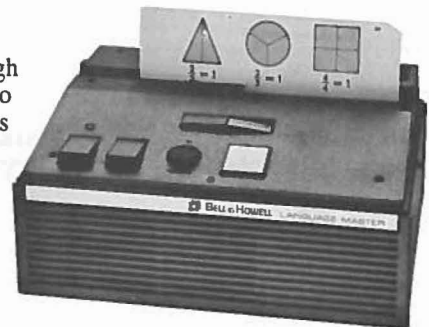
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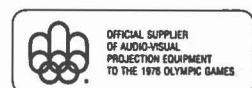For more information on the Bell & Howell Language Master Instructional System, write Bell & Howell Canada Ltd.:

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MEDIA MESSAGE

CONTENTS

COMMENT

Richard Guerrier is the publisher and editor of Learning Resources, a publication familiar to many of us. In the April 1976 issue, Dick published an article he had written titled "Is The Federal Government Restricting Your Choice of Learning Resources?" Several questions of present and potential interest and concern to the educational community were raised. Two points are of particular importance. They have a bearing on fundamental questions of what we are enabled to buy in the name of education and the price we must pay, now and in the future.

There exists an association of about forty producers and distributors of learning materials. It's called the Educational Media Producers and Distributors Association of Canada (EMPDAC). They have been in the forefront of the lobby leaning on one or more Federal Government departments in an attempt to have them reverse certain actions that have been taken and which could be damaging in the long run to users and buyers of educational resources.

In 1948, Canada became partner to an international agreement disigned to facilitate free passage of educational, cultural and scientific materials across national boundaries. In July of 1975, the Federal Government decided to invalidate all educational certification file numbers which were in effect and require that all educational materials — including non-print resources such as films, filmstrips, etc. — be submitted for re-certification. (How'd you like to have a make-work project like that one in your back pocket Oscar?) It appears that these materials are being examined for educational validity by people not qualified to pass either expert or sensible judgement on them. And some titles have been declared as non-educational even though they have been used by educators for some time in all parts of Canada.

The concern here is that if Federal departments can make arbitrary rulings and alter their interpretation and application of agreements as they have done, will the next step be to impose added taxes on those items not deemed educational — and which we wish to continue using?

Another issue is the withholding tax. There seems to be a suggestion that a film is not truly "bought" since the right to duplicate is not part of the purchase agreement. Therefore the purchaser does not really "own" it. By extension then, it's a lease or rental arrangement (they say) and a withholding tax must be paid by someone. Somewhere along the line, National Revenue stands to collect more bucks and guess whose pockets will be picked?

This particular move is being held in abeyance at the present time, largely because of the work of EMPDAC. But it (or other equally insidious devices) could rear its ugly little head again if we collectively turn our backs.

The inflationary pressures we all feel are tough enough to live with but if our buying power is going to be further eroded by added taxes and duty payments on materials from other countries, then we'll have reason to be greatly alarmed.

The motives for all this are likely quite pure. BUY CANADIAN! But surely we should give first consideration to the questions: Is it educationally sound? and Is it effective in the learning programs of the classrooms with which we are concerned? If the answer to both is yes and if it's also Canadian produced then by all means let's make it available to our students. But if it's not Canadain produced, should we then be required to pay more for it and should our path to its use be blocked? I think not.

CAUTION: Don't take this as being in any sense anti-Canadian content or anti-Canadian production. On the contrary, we've spent a great deal of time in the Toronto Board of Education *in the last few years trying to locate and evaluate Canadian produced materials that might be used in our classrooms. The point is that we shouldn't put Canadian production on a pedestal without regard for questions of quality and general usefulness.*

If we (and the Federal Government) wish to encourage the production of more home-grown learning resources, surely there are better ways.

Perhaps it's time for more of us in educational media to make our voices heard in Ottawa. If we feel there are issues here of concern to us all, then perhaps we'll not be content to have EMPDAC carry the ball alone.

Lou Wise

REPORT FROM THE PRESIDENT

by Gar Fizzard

The Board of Directors of AMTEC met in Scarborough, (Toronto), October 14, 15. Some of the items on the agenda have already been reported in a recent issue of the Newsletter. I would like to elaborate on the report of one of these items — the financial condition of the Association.

Elsewhere in this issue are the financial statements for last year and the budget for this year. It will be noted that last year there was an expenditure of almost $2,100 in excess of receipts. We were saved from an embarrassing deficit only by a reserve fund that had been accumulated in the past. Clearly, this is not a healthy situation for the Association.

In preparing the present budget the Directors agreed that we must avoid a deficit this year. We were faced with several alternatives. Among them:

to maintain last year's expenditures and depend on increased membership to make up the deficiency; to cut expenses to the level of last year's income; to increase revenue through increased membership fees.

We were reluctant to depend on increased membership to balance the budget. While we will be making a concentrated effort with respect to membership, we concluded that it is not a sound basis on which to make financial commitments. (On the matter of membership, Larry Young and his committee are trying to recruit as many new members as possible. On behalf of Larry, I wish to urge each member of the Association to attempt to recruit one new member. To help you, you will find in this issue a tear-off coupon that you are asked to forward to an acquaintance who might be a prospect as an AMTEC member).

We examined the budget for possible reductions and found that if our office expenses could be reduced by approximately $500 and if advertising in Media Message could be increased by $700, we could just about break even. We were hesitant to take this option, however, as we had just made new arrangements for our office management and were somewhat uncertain as to the accuracy of our predicted expenditures in this area. Also, increased advertising in Media Message may not materialize. Hence, the overall budget should include sufficient funds to allow for the above contingencies.

The Board concluded further that

there are some areas where, rather than a cutback, there should be an increase in expenditures. Specifically, more funds are needed for new or continuing projects of some committees and for the Board's expenses. The projects that require additional funding are those activities that are of most direct benefit to the members, such as the preparation of directories and other information on educational media in Canada.

With respect to increased Board expenses, the Board agreed that the time has come for the Association to pay more of its way in this area. In addition to the meetings at the annual conference, the Board meets twice a year, usually in Toronto. In the past, only those Board members who lived in the Toronto area or had reasons to be in the area at the appropriate time could attend Board meetings. The national representation on the Board, therefore, was more apparent than real. To make it possible for Board members, wherever they are located in Canada, to attend meetings, the Board has decided to pay half the expenses of members attending Board meetings. With this move, AMTEC is moving in the direction of being a truly "national" organization.

After a lengthly consideration of these and other alternatives, we concluded that a slight increase in the fee schedule was the only realistic option. Accordingly, effective January 1, 1977, the following will be the new membership fees:

Student. $5
Individual $20
Institutional $30
Organizational/Commercial $100

We trust that you will not find the new rates too painful, and that you will continue to support the Association.

Earlier in this report, I made reference to the activities the Board would like to have increased, activities of direct benefit to the membership. This may be an appropriate time to review some of the projects that are either on stream or in the planning stages, that help to answer the question: "What does AMTEC do for me?" The following is a partial list: (I) Media Message (II) Newsletter, including a question — answer service (III) an annual conference (IV) proceedings of the conference on tape and in Media Message (V) preparation of directories, eg. related organizations, film libraries, media/technology courses (VI) rosters of members with similar professional interests (VII) input to the federal government on matters of national concern, eg. study on non-theatrical films (VIII) recognition of outstanding contributors to media in Canadian education through a series of awards.

One of the problems of AMTEC is the difficulty of being directly relevant to the professional needs of a membership of such variety. For a young organization I suggest the record is commendable. However, with more assistance from the membership, more can be done. Are there projects that you would like to see AMTEC undertake and with which you are ready to become involved? If so, please do not hesitate to get in touch with me.

REVIEWS

by Guy Leger

Books

"Self Instruction Manual; Audio Visual Equipment", Oates, Stanton C., Wm. C. Brown Company, distributed in

Canada by Burns & MacEachern. C 1966 revised 1975.

Every so often a book comes along and I really wonder why it was

published. In the preface, the author states a two fold purpose. The first is to enable the reader to "learn for yourself". In my experience, people don't learn to operate equipment from

print unless it is the original operation manual. The author's second reason is to be able to "adjust the equipment during a lesson in a classroom". If anyone is using equipment as an aid to teaching, then it should be adjusted before the lesson. Also, the teacher should be familiar with the equipment before he or she begins to use it.

A better alternative to buying this book would be to keep a reference file of manuals in a central location. If copies of these are needed, they could then be reproduced and distributed with the equipment.

A section which should have been revised in the 1975 edition is the section on video tape recorders and their operation. Nothing is said about the ½" cartridge or ¾" cassette units.

The book has limited use for audio visual education. I would rather see the time and effort devoted to a book on the creative use of technology in classroom teaching.

"Animation In Twleve Hard Lessons" C 1972 Robert P. Heath Productions, Inc. 142 p.

Originally conceived as a correspondence course, this rather large paperback (28 cm x 35 cm) could form the nucleus of a good course in animation for high school or college students. Bob Heath designed, animated and photographed the 1964 cartoon, "The Critic" and he brings this art form to life in this book. The lessons are drawn animation and the author expects the reader to have the necessary drawing skills before he begins the course. Even though drawing isn't taught, there are many examples and illustrations which will help an experienced or inexperienced artist become an animator.

The first three of the twelve lessons deal with the subject of "inbetweening", that is breaking down the animation into steps which will make the action smooth and realistic. The lessons progress through assistant animator duties (cleaning up rough drawings) to camera and other technical arts of the animator.

This book is a must for anyone who wants to go beyond "cut-out" animation. Included is a source supply catalogue (his own) but unfortunately, it is for the American market.

Films

"Pele: The Master And His Method" c 1973 3 parts Producer Pepsi Cola, Distributor Pepsi Cola.

Using such a skilled player as Pele could offer problems in producing a coaching film on soccer. Fortunately, the producers of this series of films use his ability to show not only the perfection of his skill, but also to show the reason for practising these skills and the drills which lead to the mastery.

Though this is a company film, the mention of Pepsi is subtle. The coach or group using this series will find the overwhelming value of the techniques taught will more than make up for any sponsor mention in the film. The sponsorship by Pepsi also goes a long way towards reducing the cost of the film for users and makes them the best buy in films I have seen in a long time.

The series is recommended for anyone involved in coaching soccer skills as it covers the topics of: ball juggling, dribbling, shooting, trapping, heading, passing, penalty kicks, free kicks, goalkeeping, and physical preparation. The film comes in three parts but could be redivided into smaller segments to provide shorter teaching units. This flexibility make the series even more economical because five or six films could be obtained from the three parts.

"Conquest Of Light" Produced by Louis Marcus, Dublin Distributed by International Telefilm Enterprises Copyright 1975.

The beauty of Waterford glass and crystal is the nucleus of this film's charm. Though the film is titled, "Conquest Of Light", light does not really influence the scenes until the closing few shots. The film does, however, capture and wonderfully portray the skill and dexterity of the glass blowers, shapers and cutters. The blending of leaf and flower shapes and the cut crystal designs illustrates the artists (and these craftsmen are artists) use of nature as their source of inspiration.

This is an excellent film for all ages because there is a minimum of narration. The photographer lets the camera explore the grace of the process and the beauty of the product. Very useful in Screen Education, Language Arts and Art. To reinforce the idea that man is known through his work and creation, it could be used in Religious Education or a Values course.

A beautiful film and a welcome addition to any library.

"The Heimlich Manoeuvre: How To Save A Choking Victim" Produced by Oxford Films, Distributed by MacMillan of Canada.

Very few health films cross my desk which stir me to classify them as outstanding. This film is not outstanding in method of presentation but it is in content and importance. The Heimlich Manoeuvre is intended to save a choking victim and this film assists the professional medical or first aid instructor to introduce and demonstrate the proper technique. This film should not be used without professionally-trained instructors.

The opening scenes of a group of young adults enjoying a picnic (until one begins to choke) are realistic and aid in setting the need for this type of first aid training. The presentation is enchanced by having Dr. Heimlich teach the manoeuvre. The Heimlich Manoeuvre is recommended by the Canadian Medical Association and the Canadian Red Cross. This film would be a valuable teaching aid to those who teach life saving and first aid technique but should only be used by those trained to teach the Heimlich Manoeuvre.

AN INSTRUCTIONAL DESIGN CENTRE FOR CANADA?

by Michael Oliver

I have been invited here today to talk to you because of my interest in the possibility of establishing a Service for Instructional Materials at the Post-Secondary Level.

First of all, I should say a word about how I have developed an interest in such a Service. My first claim to be thinking about media in education, or the broader topic of problems of educational change faced by people concerned with the media, is that I have been a university professor all my working life, although I must admit that it took me rather a long while to realize that teaching was helping people to learn.

For quite a few years I felt that teaching was an opportunity to impart my wisdom to others, that it was a process of passing three times or twice weekly a test, as I gave my lectures, of my own scholarly ability. I thought of it as putting on a lively dramatic performance. Such formulations of what teaching is about are not necessarily wrong in some contexts, but I gradually became convinced that if you concentrated on these aspects instead of on the purpose of helping people learn, something was liable to go wrong with the teaching process.

My second claim to being here is that as Vice-Principal at McGill for five years I became involved with the founding of the Centre for Learning and Development and the setting up of the Educational Development Fund. When I moved from McGill to Carleton, I took with me the interest and experience which I had gained at McGill in learning and teaching questions.

The third reason for making some sort of a claim on your time is that I am, as well as being this year the President of the Association of Universities and Colleges of Canada, also the Chairman of a Committee on Learning and Teaching of AUCC. This committee

actually has quite a long history in the Association of Universities and Colleges of Canada under one name or another. In fact, about 1970, a major push was made within AUCC to bring a service to the universities and colleges of the country related to teaching and the use of media. What was called the New Learning Media Division was established and a new Learning Media Committee was set up with it. It lasted for a few years and in fact got a new lease on life about 1972, when students who were part of the AUCC meetings put a good deal of pressure on the Association to do something about teaching. But by 1974, perhaps because of the change in the mood of students and the change in the degree of pressure they were willing to put on universities for certain kinds of change and reform, the impetus seemed to have died. The New Learning Media Division never did either get the resources which it needed or the kind of liaison structure which had been envisaged, and the whole enterprise was on the verge of being done away with. Finally, it was decided to give an interim reprieve to the concept and a small committee on learning and teaching, myself and two other members, was set up. We were really asked to see if we could find some reasonable excuse for the continuance of such a committee within the Association of Universities and Colleges of Canada. The Committee felt strongly that a Canadian Association of Universities has a responsibility to interest itself in problems of learning and teaching and so we set out to find projects that could be done on a national scale.

The first approach we came up with, one on which we are still working, was the idea of a series of films on questions of teaching and learning at the post-secondary level. We felt that with in-service instructional development centres in most colleges and a growing number of unicersities, there was probably a need, which might be filled

economically on a Canada-wide basis, for films dealing with problems of instruction at the university and the college level. We realized, however, that just producing films was not going to be enough and that it would be necessary to have materials accompanying these films: suggesting uses, outlining perhaps some sort of a workshop format in which the films might be effectively employed.We envisioned a variety of packages into which the films would fit, depending on the degree of development of instructional services within each institution and the use to which the films would be put. We saw possible uses ranging from assisting the beginning teacher - the graduate student about to teach his first class or the recently hired professor - to sparking a lively discussion among experienced academics from a variety of disciplines.

The need to develop other materials and the importance of a good distribution system to inform people of possible uses of the film packages led the committee fairly naturally to the question: Is there not a need in Canada as a whole for some sort of centre for the production and distribution of non-book material? As the idea took shape, the concept of a centre faded a bit into the background, replaced by the feeling that the proper term was a service.

As we were pursuing this line of thought with a variety of people, we received a copy of the Report of the Symposium on National Concerns in Educational Technology, held at the March, 1975, AMTEC meetings. In it we read such paragraphs as this:

"Participants were generally concerned with the problems of obtaining comprehensive information in areas related to educational technology in Canada. The ability to assess materials, to even be aware of the existence of materials and hardware, to know about current events in the field - all are affected by

5

the lack of a centralized information collection and dissemination network. Comments alluded to the need for particular types of information."

Given these circumstances then, I am appreciative of the opportunity to put a few ideas before AMTEC at this meeting in St. John's and to see to what extent there is any similarity in thinking. I hope that some of these matters can be explored further in the workshop this afternoon.

I plan to summarize the concept of a service for instructional materials at the post-secondary level and then go over in a bit more detail the purposes of such a service.

The service would link together the work of existing organizations, both post-secondary institutions themselves and others such as the National Film Board, the Canadaian Film Institute, the Committee on Educational Technology of the Council of Ministers of Education, the National Library and the audio-visual organizations in each province.

The functions of the Service would be, first of all, to disseminate information - a clearing house function; secondly, to provide for the evaluation of materials; thirdly, to have some limited production capacity; and fourthly, to provide some opportunities for research on the effect and on the usefulness of learning materials.

As I listened to a keynote address given by M. Lamy of the National Film Board, it became evident that in part at least the information dissemination function which we had in mind was going to be accomplished by the national information and distribution system of film which M. Lamy described. I gather what we can look forward to is the creation of a computerized catalogue and distribution service for Canadian film materials. We feel, however, that this will answer only part of the needs which AMTEC identified in its symposium, and which we, in the thinking we have done in the AUCC Committee, feel would be needed.

First of all, there are other kinds of non-print materials than film which have to be taken account of. What about, for example, the slide-tape packages which we have seen at this conference and which exist in many of the universities and colleges in the country? Who lists them? What about audio tapes, slide collections, what about programs for computer-assisted instruction? How can ready access to these and information about them be obtained? What about the modular materials, the packages which are being produced in universities and colleges for self-instruction purposes? How can one know what Canadian materials, particularly, are available? Then of course within the field of film itself I understand that M. Lamy and the National Film Board are primarily interested in Canadian production. There are non-Canadian films which will always be of relevance for post-secondary education. The Canadian Film Institute is already handling a distribution service for these. How is this going to be worked in with the idea of the National Film Board and will there still be some need for the post-secondary institutions to have a service tied in with whatever the Film Board does, tied in with whatever the Canadian Film Institute does, which will work towards the completion of coverage with respect to these non-print materials?

There are questions which obviously come to mind as to whether these matters should be handled on a Canada-wide scale or whether they should be handled at a provincial level. Should we leave these matters to ACCESS in Alberta, to Radio-Quebec, to OECA in Ontario, to SASK-MEDIA? These bodies have experienced some problems when they have attempted to give access to their materials to those accross provincial boundaries and outside the provincial jurisdictions. Is there a need for a service at a national level to supplement and aid the processes of inter-provincial cooperation which are already beginning? One hears of the agency for tele-education which was created last year amongst the Alberta, Ontario, and Quebec institutions. Will it be

serving the need on a nation-wide level or, if not, what should supplement it?

It is quite possible that there will still be a need for an information dissemination service, for hooking up teaching in the institutions with those who are producing and distributing and have banks of information.

Now, what about the evaluation of materials? Here I think that those of us who are used to the evaluation of books as instruments to be used in the learning and teaching process get a feeling of great frustration when we are confronted with non-book material. You cannot look for it in the book review section of the learned journal in your discipline. You cannot go to the kind of evaluation by a well-known, recognized scholar in your field to determine just what the contribution of this particular non-book item is, what it can be used for, what its quality is. I would like to think that this is something which we should be moving into if we are going to get around some of the skepticism about the use of media in teaching which is still characteristic in many of the colleges and universities of the country. I have in mind a process of scholarly evaluation of these materials to know how they would fit, to save the professor the time and trouble of having to get out a film or video-tape and view the whole thing himself before he can evaluate its usefulness in the course he is giving.

A possible procedure would be for the Service to approach each disciplinary association, request it to set up a small team of reviewers, probably within the department of a given university, to evaluate non-book materials. These teams could rotate every year or two. Reports could be submitted to the professional journal where they would be read by those interested in that discipline. Such a procedure would help to bridge the gulf between academics and media people.

A third function of the Service could be production. I emphasize that this is facilitation of production rather than setting up of an actual production

centre. What we feel will be needed is a service which could command some funds to be used to help the person who wished to develop a film or a -tape production or something in computer-aided instruction, let him while he is on sabbatical have some money to begin to put together his ideas, give him enough travel funds so that he and some of his colleagues could work together on the project, help him with the production, if necessary, and then provide him with some possibility of having what he has produced distributed afterwards. The emphasis then would be not on getting a central staff, not on developing large central facilities, but on having a service which identifies some of the main gaps, looks for some of the people who want to do things and tries to provide funding channels so that what they want to do can be accomplished.

There are many possible elaborations of this approach. I am intrigued by the possibilities of a national service working on putting together some of the things already in existence so that they can be used in a variety of ways: developing print materials and tests to be used with films, video-tapes, or slides to create self-instructional modules; the production of peripheral materials to make non-Canadian films more suitable for Canadian use, the editing onto video-tape of general films so that they can be used at the post-secondary level, and in summary doing many of these things you are all familiar with and which I have been seeing demonstrated at this conference.

Finally, the notion of encouraging research on the usefulness of various combinations of non-print materials is one which requires exploration. Research on the effectiveness of materials produced for elementary and secondary schools has, I think, gone quite far, both in Canada and elsewhere, usually involving Faculties of Education. There are very few Faculties of Education studying the problems of teaching effectiveness at the university level, however, and there are very few Committees and Centres in Canadian universities and colleges which are given a clear mandate, or any funding, for research along these lines.

Is there a case for a service that could perhaps aspire to give the funding for research on post-secondary education problems which we have hoped for in vain from the Canada Council? Once again, I think it is too early, until there have been conversations in bodies like this, to be excessively specific. There does appear to us to be a need which bears further exploration and which could be given more precise definition.

Let me, then, finish these exploratory comments by saying that what we hope to do today and perhaps in other sessions of this kind is simply to put some questions before you. Does the idea of such a service as I have described for post-secondary education in Canada as a whole have merit? If so, what sort of priority should it get? Lots of good ideas are floating around; you cannot put all of them into practice, certainly not immediately. If it is worth doing, have the functions been properly described? Are there others? Or should one or more of the four I have outlined be eliminated?

Finally, if the thing is worth doing, who should do it? Is it something that AUCC should be involved in, perhaps with ACCC? Is it something which AMTEC itself should be taking on? What is the proper locus for an initiative to get a service of this kind established?

Thank you very much for the opportunity of posing these questions to you.

Dr. Oliver is the President of Carleton University and President of the Association of Universities and Colleges of Canada.

AN INSTRUCTION DESIGN CENTRE FOR CANADA?
PAR MICHAEL OLIVER

Résumé

Le Docteur Oliver est président de l'Association canadienne des collèges et universités en même temps que responsable du comité sur la'apprentissage et l'enseignement de cette Association.

A ce titre, et motivé par l'importance des média dans l'évolution de la pédagogie, il est intéressé à l'établissement d'un service des matériels didactiques au niveau post-secondaire.

Convaincu par la lecture du rapport du symposium sur les préoccupations nationales en technologie éducative (AMTEC, mars 1975) que l'AMTEC partageait ses préoccupations, le Docteur Oliver a voulu profiter de la conférence de St-Jean pour exposer son projet et entendre l'avis des intéressés.

Il s'agirait donc d'un service qui ferait le lien entre diverses institutions existantes eu égard aux besoins du niveau post-secondaire: les institutions post-secondaires elles-mêmes, l'Office National du Film, le Conseil des Ministres, les Services des média provinciaux etc...

Le Service exercerait les fonctions suivantes:

(1) Véhiculer des informations

(2) Participer a l'évaluation du matériel

(3) Produire "modestement"

(4) Offrir certaines possibilités de recherche sur les effets et l'utilité des materiels didactiques.

Un tel service est-il nécessaire? Si oui, jusqu'à quel point est-il prioritaire? S'il mérite d'exister, le fera-t-il sous l'égide de l'Association canadienne des collèges et universités? de l'AMTEC? Autant de questions posées par le Doctueur Oliver aux membres de l'AMTEC.

AN EXPLORATION OF VARIOUS MEDIA FOR TELE-TEACHING

by Michael G. Ryan and Nicole Mendenhall

1. INTRODUCTION

Communications technology can improve the performance of the modern educator. The educator performs best when the appropriate technology is chosen and when that technology is utilized effectively. This report describes communication behaviour over technologies used for university teaching.

The Teleprof field study, conducted by the Educational Technology Branch of the Department of Communication in conjection with Carleton University, investigated the relative merit of various communications technogies for remote educational purposes. This field study involved the transmission of tele-lectures between the College Militaire Royal (CMR) at St-Jean to the Royal Military College (RMC) at Kingston. The observations reported here summarize evaluational reaction based on systematic observation and does not include any statistical analyses of these observations.

2. Technology

The effectiveness of various types of technology was investigated in this study. The description of the audio, slow-scan video, closed circuit video, alpha-numeric, and rapid facsimile technologies follows[1].

2.1. Audio System

Two audio telecommunication systems were available for testing, the Bell 50-A Conferencing set and the BNR

[1] W. Hamilton, "Evaluation Trial-Teleprof Terminal Equipment and System", Education Technology Branch Memorandum 8075-5, April 25, 1975. The description of technological systems in this report relies heavily on and often quotes this memo by Mr. Hamilton.

Experimental Conference terminal (Daisy). The Daisy set was utilized for all tele-lectures. A description of each follows:

2.1.1. The Bell 50—A Conference Set

This is a voice input/output device using voice-switched microphones. Its output level may be increased by an associated voice amplifier as required for the particular situation. Its use in the evaluation was to be as a basis of comparison with the BNR Experimental Terminal, and as an alternative in the case of failure of the latter.

2.1.2. The BNR Experimental Conference Terminal

This is a voice-switched, hands-free conference terminal with an omni-directional, highly sensitive input and a high fidelity output. Its main features and those which recommend it for evaluation as a group communications facility is the ability to use it from any position in a large room and the capacity for voice-switched send-receive transmission, which permits group discussion without the inhibiting requirement for microphone switching by a monitor operator.

2.2 Video Systems

Two slow-scan television systems were utilized. Slow-scan television is a technique which permits the transmission of single frames (still pictures) from a video camera over a narrow-band (4KHz) telephone circuit. It involves local storage of the video information, transmission at a slow bit-rate, storage at the remote terminal, read-out and display. "Slow-scan television provides transmission of any pictorial graphic or printed material on the same basis as regular television. It is suitable for graphic or printed formats

for the support of a basic audio lecture". Two systems are being considered: one with the facility for two-way transmission (RCA 'video-voice' system) and one with one way transmission (Colorado Video Inc. Slow-Scan Video). Particulars of the two systems are as follows:

2.2.1. RCA Slow-Scan Television System

"This system is self-contained, having its own camera, monitor and telephone/loudspeaker terminal. It uses a silicon storage tube for data storage. It transmits either a stored picture or a direct picture. The transmission time for a stored picture is 30 seconds, and that for a direct picture is 60 seconds." The resolution of the direct picture storage is significantly better than that for the stored picture. "Because of the use of a storage tube for image storage, a previously stored image disappears from the screen while the new image is being stored. The RCA system provided consists of two terminals (send-receive) which will permit use of the slow-scan link to provide feed-back information from the remote class to the lecturer".

2.2.2. Colorado Video Incorporated (CVI) Slow-Scan Television System.

"This is a slow-scan system, similar in principle to the RCA for transmission of pictorial material over telephone for narrow band radio circuits. It employs a rotating magnetic disk for image storage. This feature permits a previous picture to be retained on the disk while the new one is gradually being registered (stored). This equipment will be used in a one-way (CMR-RMC) mode. In addition, closed circuit television was utilized".

2.2.3. Closed Circuit Television (CCTV)

Closed circuit television is being employed as an integral part of the Teleprof System for the local display of audio-visual support material in the form of graphic, pictorial or printed material. It will be used to display the output of the slow-scan TV, the alpha-numeric information and of the facsimile transmission. While use of this form of display is not new as a teaching tool, its use will be an essential part of any remote teaching system, and an evaluation of the proposed method of employment is desirable.

2.3. Alpha-Numeric Text Generator

An alpha-numeric text generator with storage and display facilities was also tested. "This equipment is basically designed for the writting of letters, numbers and symbols on a cathode ray tube (CRT/TV) display. The characters can be directly displayed or can be stored on an audio-tape cassette for subsequent call-up and display. Its use in this system is to provide print back-up notes, headings, summaries and rough graphical material. This will be stored in tape form (audio-tape) and called up at the appropriate time".

2.4. Digital Facsimile Equipment

New developments in facsimile have resulted in a capability to use facsimile facilities in a direct support role for teleconferencing and tele-education. "The features of these developments which are significant are the speed with which the transmission can be made (20-60 seconds)" and the resolution which can be achieved. "The facsimile equipment to be evaluated is a Rapifax 100 model, which is a digital transmittion, electrostatic printing type machine. It has three transmission speeds, depending on the fine detail requirements, and will send a choice of paper sizes (6"-11"-14"), in from 20 to 100 seconds. Its output will be hard copy print which can be put directly on the CCTV monitor

circuit. The facsimile will only send black and white pictures (no grey scale or colour)."

3. Research Method

3.1. Research Participants

Research participants were in large part junior-level officer cadets at CMR and RMC. More than 40 cadets took part in the study and most of the cadets were francophones. A political science professor provided the lectures on each of the four days of the trial.

3.2. Research Design

On each of four consecutive days, the professor offered the same lecture twice a day. At 9.00 A.M., he lectured to both a face-to-face group at CMR and to a remote group at RMC; and at 1.00 P.M., he lectured only to a remote group at RMC. Students, on the whole, attended the lecture at the same time slot on each of the four days (see figure I).

The BNR Daisy set (connected either by private or dial-up line) was used every day with differing augmentations for each day. Thus, the Rapifax machine was used on the first day, the two slow-scan video systems were used on the second day, the alpha-numeric system on the third day, and all systems were used on the final day. To familiarize the students and the teacher with the equipment, a trial session was held on the day prior to the first day session.

3.3 Interaction Observation Procedure

Observations for this report were made from television monitors in a room adjacent to the tele-lecture room. The observations summarized in this report were made from Kingston for the first two days and from St-Jean for the following two days. Captain Tassie an educational psychologist at CMR, shared notes and observations with this writer. Statistical analysis on both

technical and behavioral evaluations was made by Carleton University on this field trial (see bibliography).

4. RESULTS

Effective communication behaviour over novel telecommunication technologies often differs from effective face-to-face communications behaviour. Thus, the behaviour of the professor and the students over the Daisy voice-switched system differed from behaviour characteristic of the face-to-face situation in both the information-giving and information-receiving activities.

4.1. Informative Communication Behaviour

No teaching or communicative procedures had been established prior to the educational session. The professor did not receive any prior training on the system. He was familiar with the content of the course having taught it several times before. It was left up to him to adapt or modify his teaching style, course content and methodology to the media.

Most of the verbal communication took the form of the professor transmitting information to the students for periods of 10-15 minutes approximately. He addressed the microphone much more than he addressed the students at the immediate node. His volume was higher than one would expect in a face-to-face classroom. In Kingston he was heard clearly although a bit distant and in competition with some low-level line noise. Many comments from the CMR students were not comprehensible in Kingston.

4.2. Interrogative Communication Behaviour

One of the major differences between the remote and the immediate nodes related to interrogative communication behaviour. The instructor initiated most question-answer interactions;

FIGURE I

DAY	RESEARCH DESIGN	EQUIPMENT USED	TYPE OF LINE USED
Tuesday	professor with face-to-face group and remote location professor and remote location only	facsimile unit audio system (daisy)	dial-up private
Wednesday	same as above	CVI & RCA slow-scan video audio system (daisy)	private dial-up
Thursday	same as above	alpha-numeric data system audio system (daisy)	dial-up private
Friday	same as above	facsimile unit audio system (daisy) slow-scan video alpha-numeric data system	dial-up dial-up private PBX

however, most of the responses came from the immediate node rather than the remote node. Response to interrogative behaviour in St-Jean was much more rapid, immediate and complete. By contrast, the remote node paused for lengths of time varying from a few seconds to over fifty seconds, and pauses of twenty to thirty seconds were quite standard at the Kingston node prior to response. It seemed that unless the questions were specifically addressed to an individual or group, both the remote and the face-to-face group were ambiguous as to whom should reply.

The ratio of student initiated questions also differed between nodes. Thus, students at St-Jean initiated more interrogative communication behaviour than students at Kingston. The nature of these latter questions is also of interest: in Kingston, the questions were mostly requests to repeat questions, sentences or phrases, while questions at St-Jean were content related.

4.2.1. Response Give Role Emergence

A senior graduating cadet adopted the role of response giver at Kingston. He emerged as the dominant respondent during the first day after students at the Kingston node non-verbally gestured back and forth to determine an appropriate respondent. He even retained his role during the second day of lectures when the professor addressed individual students by name. Often these others did not respond or indicated they did not know the answer in which case the question responder usually provided the answer. It is interesting to note that this emergent leader knew most of the cadets at CMR having spent a year or so at the college before attending RMC.

4.2.2. Daisy and Questioning Behaviour

The voice-switching characteristic of the Daisy system may have augmented the question-responding behaviour from Kingston. The professor in St-Jean usually controlled the microphone and the first part of responses in Kingston were often lost until Kingston captured the microphone. Affirmative or negative one-word responses were especially susceptible to loss due to this voice-switching characteristic of the Daisy system.

4.2.3. Response Demand Environment

Response demand characteristics of the immediate and remote communication environments varied. One might argue that the response demand characteristics were greater at immediate node than at the remote node. The professor on the one hand could use silent probes, non-verbal gestures and group pressure to elicit responses to his questions. These strategies did not apply at the remote node and the professor's power to demand responses was consequently weakened. On the other hand, the professor knew most of the students located at CMR and a few at RMC prior to the session.

4.2.4. Reaction to Response Delay

The response latency from the remote node influenced the professor at times. Observers noted that he once indicated his frustration at the lack of feedback from Kingston by physically turning away from the Daisy.

4.3 Communication over Augmentation Systems

Participants in the Teleprof project seemed to react more positively to the alpha-numeric system than they did to either of the slow-scan systems. This may relate to the chart and graphic content of the alpha-numeric system which related more to the lecture than the pictures of persons transmitted by the slow-scan system. Unfortunately,

attempts to give the examination by the alpha-numeric system on the final day of the course was frustrated for both classes by commercial line problems.

5. CONCLUSION

Live interactive educational activities can take place over telecommunications systems. Moreover, these activities can take place successfully over telephone bandwidth. However, the narrow communication channel does demand modification in educational communication behaviour to compensate for the restraints imposed by the channel.

The professor must adopt some characteristics of the role of a broadcasting producer planning his multi-media instructional package, gathering the raw materials for the form of the medium, and orchestrating the educational technologies in support of this verbal lecture. The particular professor mentioned that his preparation took three times as long as it normally took.

The professor would probably also require technical support to treat details such as the operational state of the equipment readiness and solve technical problems that arise over the system.

With the technical support and the appropriate modification in communication behaviour, interactive tele-education can become an effective complement to face-to-face education. Communications technology can improve the performance of the modern educator.

RECOMMENDATIONS

Based on these observations, the following recommendations might prove useful in future tele-education settings:

1. Brief the participants about the unique behavioural response tendencies associated with the tele-education system.

2. Add more redundancy to communication behaviour by involving participants in the previewing, presenting and reviewing messages.

3. Encourage wide participation in response-giving by addressing questions to individuals rather than locations.

4. Provide more opportunity for intergroup interaction and student participation during classes.

5. Provide a teaching assistant at the remote node to serve as an extension of the professor.

6. Provide extra rewards for the professor as his preparation time greatly increases.

7. Implications associated with recording and re-use of tele-lectures should be investigated. This might include a consideration of copywright, performance fees and royalties.

8. Conduct more research in the area of mediated teaching to determine its effectiveness, its appropriate use and benefits to be derived.

9. Develop manual for remote interpersonal and intergroup communication.

10. Research and develop teaching styles methodology and content presentation appropriate to the media.

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FULL-TIME FOR THE SUMMER: THE MEMORIAL UNIVERSITY MEDIA INSTITUTE

by Geoffrey Potter

This is quite a personal thing. I teach in a university— courses in a catch-all area ambiguously described as "educational media." Many of the people who attend my classes hope, one day, to become teachers.

There are a lot of courses like mine in Canada, and the range of teaching methods used by professors in such courses is very wide indeed. Each of us has our own style and our sense of what a teacher needs to know about "the media." One of us somewhere will tell them how to plug things in; another will concentrate on what we now call "visual literacy;" someone else will package everything; someone else may set that weightiest of all educational crosses, systematic design, on unsuspecting students' shoulders. We each have our point of view in a professional field sufficiently nebulous to contain us all. And knowing that as long as I don't freak out too many helping hands with speculation about machines replacing people, I feel fairly safe with my particular style. So I turn my attention to my students. Who are they? Where do they come from? What are they doing here anyway? What values, fears and hopes do they bring with them? What do they expect of me?

They bounce (well, some of them) in at 10:30 on Tuesday morning, having used the previous ten minutes to click their brains away from Episode 18 of English 100, or some other methods

course and . . . and what? Locate channel 360 and tune in for fifty minutes on the overhead projector or why people who make television commercials are polluting kids' minds?

By about eleven o'clock they are either right into it or right out of it, excited or asleep. The excited ones excite me. They are voluble, questioning, showing week by week a growing concern about what media is doing, and what it can do both for them and for the children they love to be with. "The rest", as I call them, (a minority I hasten to add), are really more concerned about how to get a "B" and whether or not it's eleven-twenty than they are about how television can help children to learn to read or why some kids like making movies.

At the end of each term I reflect on what we all did in those courses, and I find myself, year by year, becoming more and more concerned about that whole "education media" thing with its electronic professors expending vast amounts of energy trying to justify their existence, (AMTEC 1976, even had a morale-boosting major address about how media is better than un-media); its supercool salesmen with their latest this or that; its cautious administrators with their closely-guarded keys to the school audio-visual closets; and suspended right in the middle of us all, the people we do it all for, the teachers.

Concerning media matters, most teachers, I suspect, don't know what's going on. Not because we're not all very busy selling them our ideas and machines, but because we've all got a different angle.

Having reflected on that, I then think for a while about my own role. Super-cool's store is open all day, six days a week, plenty of time for him to get his message across. And the Guardian? Well, his place is on the go ten hours a day, five days a week. And me? When they come to me I get three hours a week for thirteen weeks, in which time I've got to lead my students from almost total media illiteracy to a point at which they can, to coin a well-worn phrase "integrate the media into their professional work as teachers."

Easily said. Very easily theorized, but, oh so very difficult to do. My classes should be open for fifty hours a week at least. Three's not much use when you think of what I've got to do and it's far less use when you think of what the students in the course are being asked to do: namely to understand the complex, ever-changing world of educational media in thirty-nine hours. From the point of view of a large majority of teachers and education students who genuinely want to understand media, the average media course is all too often an unsatisfactory experience. It's too short. Class periods are too brief. The gap between what the students know

about media when they enter the course and what we assume they will know and be able to do by the end of it, is far too wide. And so they emerge at the end having "done" a media course. And off they go into the school system to find a job or to redefine the one they've got. They know a little bit here, a little bit there, a few prices, some model numbers and frequently quite a few ways of making transparencies and slides. They're vaguely aware of what media may be doing to people. Well-instructed, busy and involved throughout their course, they emerge with a mere smattering of knowledge about the vast and complex business of communications.

Theretically, the arrival of a new young teacher should be a high moment in any school's year. A rich combination of the latest methods, most recent research findings and a good comprehension of modern information media should be nothing short of a sheer delight to more established colleagues — I tell myself. But somehow from student practica onwards it's not often like that. Experience has taught the Guardian and others like him to exercise extreme caution when confronted with youthful requests for expensive machinery. He's got too many other unwrapped things in the AV closet to risk more unnecessary expense. And Mr. and Mrs. Average, whoever they are, in most cases don't want their kid "playing with cameras." They want him educated, which apparently is something totally different. And school trustees don't want the quiet disturbed by idle talk of communication. As I mentioned earlier, each of the various forces that work on the teacher has a different perspective, the collective manifestation of which is a whole range of contradictory viewpoints.

It has occured to me over the past few years that what the education student needs in media studies is nothing less than an intense and total immersion in the language and form of communication. Something like the French immersion courses offered in Quebec or the six-week theatre workshops in Toronto and Montreal. The standard

course lacks the facility for an overview; it takes the tools of communication out of the context of human interaction.

In 1973, in St. John's, the director of the centre for audio-visual education at Memorial University, Dr. Garfield Fizzard established a summer-session programme called the Media Institute which was one of the first total immersion media courses offered during summer session in Canada. The structure was quite simple: registered students, most of whom were practising teachers, spent all day, every day involved in a carefully designed series of media-oriented experiences, ranging from lectures on McLuhan and Eisenstein through workshops in the operation of closed-circuit television system, to projects involving the community use of media. Supported by the considerable facilities of Memorial University's Centre for audio-visual education, the course involved thrity students, myself as instructor, a full-time assistant, and as required, the services and advice of eight media personnel. The students paid for three courses and were admitted upon the understanding that they would be expected to commit themselves to at least eight hours work per day.

In many ways, the Media Institute satisfactorily answered some of my concerns about the inadequacy of many current credit courses in media. Firstly, it centered student interest and held it for six weeks, thereby revealing, at least in my experience, the relative irrelevance of the normal process which comprises little more than working towards a grade by walking into a specific room on three unrelated occasions each week. The institute potentially released each student's personal reasons for wanting to understand media, as opposed to his professional reasons for getting a specific grade or credit.

As I stated before, most teachers and education students seem to know very little in a practical sense about media, and I suspect that their interest in its effects on people and indeed, what it

may be doing to themselves, is very genuine. I suspect that what bothers them is not so much how to make a transparency but what the inanities on their own television set may be doing to their children's minds; not so much how to thread a film onto a projector but rather just how legitimate are their personal concerns that politicians and big-business are manipulating them via their television sets: that newscasters are no less sensational than Kojak. What they're really concerned about is that their own lives are changing before their very eyes and that the rate at which they are receiving information is overwhelming. I don't think that they will necessarily admit to these personal concerns when they enroll in a media course, but certainly my experience in the Media Institute suggested very strongly that as the course went along they became more and more aware that behind the professional reasons was a far more powerful, personal concern.

It seemed to me that a full-time immersion institute was far more likely to facilitate answers to such concerns, while at the same time handling the practical problems of operating equipment, than was a standard credit course.

Secondly, the Media Institute resolved the problem of the separateness and isolation from each other of various aspects of media studies — something which has been of particular concern to me over the past few years. School librarians frequently know quite a lot about books; but libraries are resource centers and multi-media. Few librarians understand media, few media specialists understand the operation of a library. Most library credit courses make little or no reference to non-print media beyond how it is catalogued; similarly, few, if any, media courses concern themselves with cataloguing books. Many basic media courses are solely concerned with the mechanics of operating equipment — the "how" of it all, while the "why" is reserved for more advanced courses. In other words, it is quite possible, in many Canadian universities, to study one aspect of the media and remain

completely ignorant of all other aspects. Now, I wonder why this has happened. Print is the greatest of all technological achievements, and books the most powerful media for decades; literacy our most cherished tool of communication.

I am not being critical of the individual media courses that exist in this country's universities and colleges, but I do wish to call attention to the fact that media are pathways by which people interact. Whether they are the dazzling high-speed images of television or the rich, contemplative passages of a book is quite immaterial in this context. Media interweave through each other, criss-crossing each other's paths weaving themselves into multi-coloured network. And I seriously doubt the value to our education system of librarians who know little or nothing about film or video, or of a so-called "audio-visual specialist" who ignores the greatest of all technologies, print. I admit to being no less dissatisfied by the historian who ignores the geography and folk music of the people whose lives he recreates; the mathematician who igornes the poetry and music embedded in his subject; or the science teacher who ignores the art and pattern at the base of all physics.

We suffer in education from too many sub-divisions. I thought that the whole point of locating the components of a system was so that we could understand how they interact. Now we face the same danger with developing studies of communications technology. I'm sure that there would be much benefit to the education student if all the relevant components of educational media were available to him for intense study but in most education faculties in this country this is not the case. The organizational pressures brought to bear upon the average student to complete even the simplest of academic degrees leaves little time or space for integrated studies of something as suspect as the media. It's worth noting, perhaps, that very few education faculties in this country insist that their students master even the operation of basic

classroom audio-visual media before graduating, and in many cases less than a quarter of the registered students in education faculties receive any media instruction at all.

So, Memorial University's Media Institute did, therefore, provide a poetential solution to the media-related problems — at least the ones that I could identify — of both education students and professors.

I directed the Media Institute in 1974 and in 1975, and perhaps the best way to explain how I chose to integrate the various aspects of media studies, which have been identified, into the six-week experience is to describe what went on during the six weeks.

First — my objectives. I find myself increasingly disturbed by the actual rigidity and exclusiveness of imposed objectives. I'm not suggesting that my goals shouldn't be clear but it occurred to me when I contemplated running the Institute that my first task was to ask the students what they wanted from the course. And here are some of their replies.

"I wanted to be somehow tuned in to what was happening."

"I've been accepted for the position of resource teacher in a school system and felt the course would benefit me as I had little or no experience in the media."

"I enrolled because I figured this course would help me as a social studies teacher."

"I'd already done one media course and had really learned something. No other teacher on our staff of thirteen had any media training and we were running into all kinds of trouble using our equipment properly."

"I'm involved in library work, so I enrolled in this course to broaden my knowledge of the various kinds of media vailable for my use."

"Our school has a Resource Centre

and I wanted to become familiar with the materials available to me."

On the basis of replies such as these, I fashioned my approach to the structure of the Institute. Obviously, I had to turn these people on — to excite them. Equally obviously, I had to assure that their creativity and desire to communicate weren't hampered by an inability to operate the equipment. And finally, I had to show them how the community they lived in, St. John's, was influenced by and used media.

I suppose I could have given each one of these aspects equal time and produced a sequence of lectures and demonstrations about each, thereby giving the students a standard, well-orangized package. But for me, this begged the question in much the same way as the multitude of sub-divisions within the school curriculum do little to help a student comprehend the way life's components interact. It's as though we, as teachers, instructors, sophists, or whatever we like to think we are, feel a responsibility to make life comprehensible to people, which reminds me of the ecology poster which you can buy in many stores these days, which simply states "You can't put it all together. It already is together."

I was not about to fall into the trap of assuming that some magical process inside my students' heads would enable them to integrate seemingly disconnected items into a comprehensive whole. I was not going to make any attempt to separate learning the skills of equipment operation from the social effects of media on individuals and a community.

The Media Institute became, therefore, for the students, a series of excursions into our multi-media world. During the first two days of our 1975 session, for example, I spent a total of twenty hours instructing them in the operation of tape recorders, videotape recorders and other audio-visual paraphernalia that were around them. Then, at about 8:30 in the morning on the third day we all — that's the thirty

students plus myself and my assistant drove to a little fishing village some thirty miles from St. John's. The place is beautifully and simply named Flat Rock. With us went two porta-paks, half a dozen 35mm. cameras, some cassette tape recorders, some 8mm. film cameras and a large picnic lunch. We spent the entire day with the people of Flat Rock recording their community and their lives and in some cases their personal histories. We filmed their world, videotaped it and recorded it. At the end of the day, after strongly denying that we were in any way associated with the C.B.C., we returned to the University. The following three days were spent developing photographs, editing tapes and assembling slide tape programs about the village.

An experience. What did it mean? To the students, especially those who took the finished material back to show the people of the community, it was an integrated multi-media experience. To me, it was an intense day of instruction. By starting at my students' starting point and throwing them into a situation that demanded practical use of principles acquired during the previous two days, and by utilizing their own sense of involve-ment in the village, and the interest and cooperation of the villagers, whose normal daily routine we'd disturbed, I was able to bring them, in one week, from almost complete media illiteracy to a point at which they were at least initially cognizant of the ways in which the practical, personal and social aspects of media integrate them-selves into a total experience. It would be easy enough to analyze all the components of the experience (camera operation, closed circuit tele-vision, lenses, tape, the seashore, fishermen, 8mm. cameras, housewives, social studies, boats, aperture controls, seaweed, dark rooms, kids, etc.) but that would not really be the point. I accept McLuhan's view of machines as extensions of human behaviour. There-fore, all I was dealing with — perhaps all any of us are ever dealing with really — is people, their interaction with the elements of their society, their personal attempts to communi-

cate and to make some sense of their lives.

The second week comprised two three-hour seminars on the general theme of "What's Media? What's It Doing To Us?" and specifically centred on the provocative writings of McLuhan and Toffler; plus what we termed "the first project", a minor piece of audio-visual work designed like the visit to Flat Rock as an exercise in the familiariza-tion of the equipment. Students were virtually free to do anything they liked, and it's worth noting that only one of them elected to produce some-thing directly related to his work as a classroom teacher. Several made slide-tape programs about local events or personalities. Some filmed the coast from a tuna boat which we borrowed from the Provincial Government for three days. Others made short animated films. Some edited slides and videotapes of an afternoon spent in a Canadian Transport helicopter, 5000 ft. above the city. One man measured the distance from his dog's eyes to the ground and constructed a 6 ft. long trolley with a firm mounting for a 16mm. camera, and with the aid of some volunteer trolley pushers, set himself down on his invention and made a movie about St. John's as seen from his pet's point of view. One man made a short videotape about a New-foundland activity that always cap-tures mainland imagination — that is, the floating of a house from an island outport to a larger settlement on the main part of the Province. I recall the interview with the house owner, an elderly lady who had lived on the island all her life and was now a victim of the harsh resettlement program. It was particularly poignant.

During the third, fourth and fifth weeks, the students, working in small groups, produced their major project. It was during this period that they be-came intensely involved in the life of the community. I implied earlier that for me technique in media is an interesting necessity and makes for a wide variety of production possibilities, but beyond the academics of it all are people — rich, poor, old, young, living out their lives, just like you and I, each

affected by a multitude of forces, one of which — and a very powerful one, too — is audio-visual media. I cannot say that a major project at this time resulting in say, two dozen transparen-cies about Confederation, or a film strip about igloos would have been un-acceptable, only that I wouldn't have regarded such exercises as contributing very much to my student's sense of the everyday uses and effects of media upon that large majority of our countrymen who are not at school be-ing daily taught history and geography. Actually, no one wished to reduce such grand things as Confederation and Igloos to a mere set of transparen-cies, so the problem of counselling errant teachers away from pedantry and back into the immediate world never actually arose.

It is perhaps worth noting that the students in this Institute, most of whom were educators, showed little desire to produce teaching aids. Their concerns were more personal. It was as if they felt a need for self-explora-tion, not more methodology.

One girl made a carrot cake one day, took it to the birthday celebration of a fisherman in St. John's, got him and his friends to sing some of their old fishing folk songs, tape-recorded them, spent the next two weeks taping and photographing the men at home and on the sea, and produced a fascinating multi-media production about the life on The Battery — a unique fishing community that clings to the cliffside by the entrance to St. John's harbour. Three men made a television program about a local scandal — a landlord had refused to repair cracks, or trap the rats in a downtown apartment building and pleas to council had got shuffled away in some file in City Hall. So these three fellows took portapaks and cameras to the local Tenants' Associa-tion and asked if they could help. They were welcomed by the people who, it seemed, felt as though they'd exhaust-ed their means of obtaining the repairs and getting rid of the rats. And several local leaders were most interested in the videotape.

There were several similar projects, the most intriguing and revealing of which

I want to describe in some detail because it illustrates well my personal conviction that media studies should be closely related to and understood in terms of everyday human activity. In the summer of 1974, General Spinola suddenly became leader of Portuagal. His successful takeover occurred just as the Portuguese fishing fleet, which is known as the White Fleet, made its usual call at St. John's harbour. Many of the men who work on the ships of the White Fleet are conscripts. For years these boats have sailed into St. John's from the Grand Banks, stayed for a few days and then left for home. But on this occasion, with their country in political and military turmoil, the fishermen refused to leave the city. Such an event, tantamount almost to mutiny, offered the Media Institute a wonderful opportunity. Six students, including a Priest and Head Mistress of a school in central Newfoundland, took portapaks, film camers and tape recorders to the White ships. The sailors were delighted at the attention and the machinery, and gave interviews, danced, told tales, gave tours of their ships, held several banquets and drinking sessions on board, all of which were recorded. It took about ten days for the group to edit the material down to a forty minute documentary about the fishermen and their future. On the night of the showing of this program at the Fishermen's Centre in St. John's, these six students had an audience of almost four hundred, and in the moments that followed the showing of the tape, I could feel both the fishermen's sense of involvement — for many of them had said things to the camera that they never would have dared say to anyone else — and the students' sense of achievement at having captured this very special moment in the life of the city. I got this same feeling from each project the students did, and by the end of the sixth week, when everyone was about to go home, I realized that we were all exhausted, and yet we were elated — high, you might call it — on pure involvement.

I wrote to the students a few weeks after it was all over and asked them what they had learned and what they'd done with what they had learned, and here are some of their replies:

"Specifically, I learned the basics of photography — developing and print film, making slide tape presentations and use of videotape, a little about recording and a little about sound. I learned that audiovisual materials are a valuable teaching aid. I'm very satisfied with the knowledge I've gained about processing and using different cameras and the uses to which all this media can be put."

" I learned plenty. There's more to this equipment and its use than appears at first. I learned a lot of different techniques and methods which enabled me to effectively use the equipment."

"It's impossible to pinpoint all that I learned. I would say that the course developed in me a great interest in photography. It also gave me the fundamentals in developing and editing. Before attempting the course I hadn't the slightest idea about media. By the end of it, I felt competent."

And to the question "What did you do with what you learned?", these are some of the replies:

"We have a darkroom now in our school and I'm developing an interesting attitude towards it on the part of our students."

"I've used a number of media materials this year and I was able to use them this year with greater meaning."

"I've instructed our own staff in the use of media equipment and how best to utilize it, how to understand it."

"I've been able to help both students and teachers by suggesting new ideas for projects. It's difficult to pinpoint, but I've used many of the ideas I learned in the course in my day-to-day teaching."

"I've not only used my knowledge of the media to supplement my own method of teaching but I've been able to help other teachers to learn about it also."

Teaching people about media makes us very conscious of method and design, so lest I would leave you with the impression that I think Media Institutes are the only way to teach, let me conclude by referring back to the first point I made. We each teach according to our personal assessment of what needs to be taught and we each teach our students in what we consider to be the best way. I have taught many media courses within the framework of the University term, and while I am satisfied with these in their context, I am little short of euphoric about my own experiences as a teacher in the Media Institute. The comination of sufficient time and intense curiosity and a sense of the immediate relevance of the media to everyday life is magic.

How does one measure the collective energy of thirty intelligent, curious adults who willingly spent ten hours a day for thirty-five days immersed in the media?

Geoffrey Potter is an Assistant Professor in the Faculty of Education, University of Victoria, B.C.

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- . An annual national conference.
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- . Preparation of directories, eg. related organizations, film libraries, media / technology courses in Canada.
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A STUDY OF STATE AND PROVINCIAL EDUCATIONAL BROADCASTING NETWORKS

by Dr. Tom Ditzel

The following is a summary of a presentation at AMTEC '76, St. John's, Newfoundland. It was included as one of the concurrent sessions.

Dr. Ditzel surveyed eleven State educational television systems comparing them with each other and the systems in Canadian provinces. He provided those who attended the session with copies of the organizational charts for the state organizations and using slides and VTR explained each of their characteristics and accomplishments.

Of particular interest was the range of objectives among the various systems. Dr. Ditzel showed that the objectives of earlier ETV systems had been stated in rather rigid instructional terms while those which had been formed more recently expressed their objectives in more general cultural terms.

American state-wide systems are often supplemented by local ETV stations which were established by a local system or university before the state system was set up. The size of state systems ranges from the Maine ETV network with a budget of less than a million and 70 employees to the South Carolina system which spends almost 9 million and has a staff of over 300.

Dr. Ditzel pointed out that state-wide educational television systems served as outlets for Public Broadcasting programs as well as providing many local services to the community and to schools.

While there was generally excellent public support for the state networks and while their "products" were finding acceptance in schools and homes there is still a lack of good research which would assist the networks in making a more effective contribution to the educational scene.

Dr. Tom Ditzel is Executive Director, Iowa Educational Broadcasting Network, Iowa, U.S.A.

CURRENT ISSUES IN MEDIA MANAGEMENT

by Ken Bowers

The following is a summary of discussion at one of the Special Interest Group meetings at AMTEC '76, St. John's, Newfoundland, Dr. Ken Bowers was the chairman and he prepared this summary.

The chairman, Ken Bowers called the session to order. He explained that a Media Managers group had met first in Calgary in June, 1975. Five of the people from the Calgary meeting were in attendance at this session, among a total of 25 attending.

Ken Bowers had written to all those attending the Calgary session, soliciting participation in the program. Positive answers were received from two individuals, but only one of those was present and prepared to participate, Paul Byrne of Niagara College.

The chairman had also brought a sound-slide set on the Media Services, Faculty of Education, University of Alberta. It was shown to those present, as an example of an attempt to communicate with faculty members. It was stated by the chairman that one of the major ongoing problems of the media services of the Faculty of Education at Edmonton is the development of good relationships and good lines of communications between faculty and Media Centre staff. The sound slide presentation used in Faculty Council and in department meetings is one attempt to solve this problem.

Paul Byrne then used slides and overhead transparencies to explain some aspects of his centres' activities at Niagara College. Some problems regarding filling out forms, charge back systems, and staffing were identified.

Groups discussion established the following points:

1. There is a need to distribute a mailing list of the members present, so that information on media management might be exchanged.

2. Personnel classification, job descriptions, and other related administrative problems are areas of concern.

3. Don Bates (Grey County, Ontario) has developed job descriptions for his service, and is willing to share them with interested managers.

4. Nick Spillios (Edmonton Public School Board, Alberta) is willing to make available three papers he acquired at AECT. They deal with

personnel administration in media.

5. There is a job classification study or report available from Ontario sources, and copies are available on the fourth floor of the Education Building, in the conference offices.

6. The chairman will undertake to ensure a double-session meeting of Media Managers at the next conference. He will also endeavor to involve members of the group present at this conference in setting priorities for topics and arranging for presentations on those topics at the next conference of AMTEC.

7. One major problem facing at least one media manager present is to acquire more ammunition to be used in persuading fellow educators and a adminstrators that media can teach and deserve support.

Dr. Ken Bowers is the Co-ordinator, Audio-Visual Media Centre, University of Alberta, Edmonton.

THE APPARENT VIABILITY OF THE PUBLIC ACCESS (COMMUNITY) CABLE TELEVISION IDEA IN URBAN NORTH AMERICA

by Gilbert Gillespie

The Spring 1976 issue of Media Message contained an article by Associate Editor Bob Miller in which he called for research resumes that might be published in future issues. The following abstract was received from Dr. Gilbert Gillespie of Toronto. It summarizes research he did regarding public access cable television while working at the University of Kansas. Media Message would be pleased to publish results of current research in this area if anyone out there has recently done or is currently doing research into various aspects of this use of the TV medium.   L.W.

1. Statement of the Problem: Within the past few months there has begun to develop in the United States and Canada a tool of unknown power for opening up new channels of dialogue in those communities capable of originating cable televison production. The problem for the proposed dissertation was to examine the phenomenon of public access cable television, as it is called in the United States, or community television, as it is called in Canada, specifically in terms of its state of development and raison d'etre as stated by those individuals, organizations, and agencies most responsible for its development.

2. Procedure: To build a substantial foundation for a comprehensive story of public access (community) cable television (PACT), more than 125 individuals, agencies, and organizations were sent a copy of a 1 paragraph letter designed to "fish" for general information concerning the development of PACT in the United States and Canada. The primary source of raw data for the study was a survey questionnaire mailed to the Office of the Mayor in (1) the largest American city in each of the top—100 television markets, and (2) the 50 largest Canadian cities.

3. Findings: The general survey provided information for a chronology of the development of the public access idea. The chronology begins with Robert Flaherty's introduction of "participation mystique" in his documentary film debut Nanook of the North (c. 1922). It ends with the Canadian Radio-Television Commission cable survey of 1972 which revealed 54 systems doing at least 2 hours of PACT each week, 40 systems doing 2 to 5 hours, and 25 systems were doing over 5 hours each week. The general survey conducted for initiation of this study also led to discovery of a National Film Board contribution to Canada's War on Poverty called Challenge for Change. A social action film unit established and supported by a cosortium of federal government departments, Challenge for Change joined with the Extension Department at Newfoundland's Memorial University to resurrect Robert Flaherty's humanistic film technique of "participative mystique," This technique provided the subject Nanook access to the decision making process involved in the production of the film Nanook of the North. The rediscovery occurred in 1967 on poverty-stricken and remote Fogo Island, Newfoundland and soon attracted widespread attention. More recently the NFB's French Canadian counterpart Societe Nouvelle has undertaken an experiment in social animation at Normandin, Quebec employing portapak video camera-playback units that has become a model of inspiration for those working to decentralize control of the televised signal. The PACT idea is now moving out across North America from Fogo Island and Normandin, and from New York City where the major American access experiment has been underway since the summer of 1971. The idea is moving by word-of-mouth, newsletter, videotape, speakers bureaus, non-profit "seeding agencies" or consultants, workshops, and other media.

The questionnaire survey drew a response either by letter (31%), or questionnaire (38%) from 105 of the 150 cities surveyed for a total return of 69%. Of the 27 Canadian cities responding, 14 have cable; 14 of the 41 top-50 American cities responding have cable, as do 11 of the 35 respondents in the 51-100 class. Twelve cities (6 in Canada, 4 in the top-50, and 2 in the 51-100 class of American television markets) have PACT. One PACT start was planned for the last half of 1973 in Canada, 8 in the first 50 American markets, and 5 in the second 50.

4. Conculsion: The results of the questionnaire survey support the conclusion drawn from the general survey that public access to the media is a provocative experimental idea that is slowly emerging in the urban centers of North America as the vehicle of cable becomes available. Also, among the general con-

clusions reached as a result of the study were these: (1) City governments are, for the most part, in accord with the federal government dictum that public participation in the creation and control of tele-communications is generally advantageous to a community. (2) Public access proponents subscribe to the macrorevolutionary theory that the quality of life in a community can be substantially enriched through decentralization of tele-communications program control. (3) The prime source of energy stimulating enlargement of the public access idea in the beginning, innovative National Film Board personnel and independent "video freaks," are now being joined by a rapidly swelling contingent of traditional organizations such as national and local church consortiums, cable system operators, and the Federal Communications Commission. (4) PACT is a secular idea that stimulates a religious

fervor and devotion which, when applied to the socioeconomic problems of a community, can elevate the quality of life dramatically. The final conclusion is elaborated upon to reveal the possible value of "a theology of communication" or dialogue that can result from an application of PACT to communication and human relations probelms of both a local and national character.

A microfilm or xerographic copy of the complete manuscript is available from the publisher, University Micro-films, Ann Arbor, Michigan, at the standard prices: any microfilm copy at $4.00, and any xerographic copy at $10.00 plus shipping and handling and any applicable taxes.

CRITICAL ISSUES IN CANADIAN EDUCATIONAL TELEVISION*

by Wayne Blair

Critical Issues

In this chapter, critical issues identified from a review of the Canadian educational television literature are summarized and discussed. The chapter has been divided into two sections. The first section deals with critical issues of an historical nature, that is, federal-provincial relationships, educator — broadcaster relationships, copyright law, an emphasis on hardware, utilization, finance, coordination on a national scale and changing technology. The second section deals with critical issues of a recent nature, that is, national educational television, satellite technology, provincial educational communications agency organization, information — research, Canadian software production and increasing the educational television audience.

Critical Issues of an Historical Nature

The investigator has identified a number of educational television critical issues of an historical nature. These issues have continued until the present as major determinants of educational television in Canada. These issues are as follows:

1. The issue of federal — provinical relationships has led to much delay of Canadian educational television broadcasting. This delay resulted in a number of closed-circuit television experiments, but stalled provincial involvement in VHF and UHF broadcasting for a number of years. Presently, this issue has two components. The first is the regulations of the federal government regarding Canadian content of television broadcasts, the second is the federal

definition of educational broadcasting. In general, the provincial position maintains that these are provincial jurisdictions because of their educational nature, while the federal position maintains that these are federal jurisdictions because of their broadcasting nature.

2. The issue of educator — broadcaster relationships has led to inferior television productions and communication break down between these two groups. Problems arising from this relationship were noted many times in the literature. In general, the difficulty arises when the educator expects a television program to contribute to a specific learning situation and the broadcaster expects to adhere to industry standards for production and distribution.

3. The issue of copyright law became important when the technology of video recording became widely available, in the late 60's, to education. As the copyright law does not address this problem, the educational potential of most television programs cannot be harnessed legally. In general, this is true of television programs broadcast by commerical television stations. In the case of educational television broadcasts, the copyright is usually cleared by the originating provincial agency. It is the investigator's estimate that video recording illegally for educational purposes is a common occurrence in Canada.

4. The emphasis Canadian education has placed on technology has been a recurring issue. Repeatedly, the hardware was available long before the software was available or even the television applications were ascertained. In general, this has led to a great deal of equipment evaluation but very little education.

5. The issue of utilization had its beginnings with the experience obtained from educational radio broadcasting. Major utilization problems occurred due to broadcast scheduling inflexibility, school time-table inflexibility, insufficient receiving equipment and appropriate software integration with curricula. For the most part, all of these problems continue at present with educational television. Video recording and duplication have improved the educational institutional use of educational television, but, for the most part, educational television has not made a mjor impact on the lives of Canadians.

6. The issue of finance has tended to delay the development of educational television in Canada. Large differences exist between provinces with respect to educational television utilization because educational television is a very expensive activity to undertake. Only four of the ten provinces have initiated provincial educational communications agencies.

7. The issue of coordination on a national scale was noted as lacking a number of times in the literature. Beyond the coordination involved in the Canadian Broadcasting Corporation National and Western Regional school broadcasts, little coordination has been initiated.

8. The issue of changing technology has created a degree of uncertainty in educational television development with respect to hardware. The technology of educational television hardware has improved rapidly and hardware formats have changed a number of times. At present, the video-disc is the latest in a long series of educational television technological changes.

Critical Issues of a Recent Nature

The investigator has identified a number of educational television critical issues of a recent nature. These issues have not been significant problems during the development of educational television in Canada until the 1970's. These issues are as follows:

1. The issue of national educational television has emerged with the formation of the Agency for Tele-Education in Canada. That is, with the emergence of four provincial educational communications agencies, there is already a significant flow of educational television programs occurring between these provinces. It is conceivable that broadcasting on an interprovincial basis will occur in the near future. This brings into question the future of the Canadian Broadcasting Corporation School Broadcast activities. In addition, when one recalls the 1969 federal proposal for a Canadian Educational Broadcasting Agency, the possibility of future federal involvement becomes feasible.

2. The issue of satellite technology could have a great deal of influence on the future of educational television distribution and financing. At present, UHF is the only educa-

tional television broadcasting vehicle open to provincial broadcasting agencies.

3. The issue of which provincial educational communications agency organization is most appropriate, the Ontario model or the Alberta model, has emerged. Certainly there is a striking similarity between all four provincial communications agencies, but a number of questions arise regarding which model is more appropriate to a specific province, what government department or departments should the agencies report to and how does each agency serve the people in their respective province.

4. The issue of Canadian educational television information and research was a significant problem to the present investigator. In this regard, most of the literature reviewed could be described as fugitive. It would appear, that national associations and information retrieval institutions such as university libraries, have not directed significant resources to the collection and retrieval of educational television and research literature.

5. The issue of Canadian software production has improved with the emergence of the four provincial educational communications agencies, but software production is very expensive. The role of the Canadian Broadcasting Corporation and the National Film Board could be considered as relating to this issue. The production capability of these two organizations is tremendous. If some of this capability could be directed to Canadian educational television, significant benefits would be possible.

6. The issue of increasing the educational television audience has emerged with the use of the UHF broadcast vehicle in Ontario and Quebec. The use of educational television by educational institutions is widespread in Canada, but utilization levels vary greatly due to

a combination of any number of critical issues. In Ontario and Quebec, for the first time, the potential of educational television may be realized. For the first time, an attempt is being made to serve the entire population in a specific province.

Summary, Conclusions and Recommendations Summary

In this study, the investigator surveyed the Canadian educational television literature, the purpose of which was to identify critical issues in Canadian educational television. The investigator was able to identify eight critical issues of an historical nature, as follows:

1. federal — provincial relationships

2. educator — broadcaster relationships

3. copyright law

4. an emphasis on hardware

5. utilization

6. finance

7. coordination on a national scale

8. changing technology

and six critical issues of a recent nature, as follows:

1. national educational television

2. satellite technology

3. provincial educational communications agency organization

4. information — research

5. Canadian software production

6. increasing the educational television audience

These fourteen critical issues are the major forces that are shaping Canadian educational television today.

Conclusions

The main findings of this investigation are presented with reference to the five questions and hypotheses that were considered at the beginning of the study.

Hypothesis 1.   The postulation that Canadian educators have not been successful at harnessing the potential benefit of television for educational purposes could neither be accepted or rejected. A number of successful educational television applications were located by the investigator. The difficulty with any assessment of Canadian educational television is the scarcity of continuing applications. For any number of reasons, continuing educational television applications have not been common in Canada. Successes have been recorded, but for a variety of reasons that are summarized as critical issues in Chapter IV, educational television in Canada has been sporadic. Perhaps, the present situation could be best described as experimental, but the present educational television efforts of Quebec, Ontario, Saskatchewan and Alberta should be closely observed. The next five years may allow the first opportunity to examine this hypothesis.

Hypothesis 2.   The postulation that the present status of Canadian educational television is low, but that recent developments indicate rapid developments will elevate this status in the near future, was generally supported. At the local level, educational television has become an important tool in the classroom alongside of media such as 16mm films and 35mm slides. At the provincial, regional and national levels educational television has maintained a sporadic, experimental profile. Only the Canadian Broadcasting Corporation has maintained a continuing activity in this area, but the amount of activitiy has been very limited. For the most part, the Canadian population does not have access to educational television.

Recent developments in Ontario, Quebec and Alberta, but particularly

Ontario and Quebec, have made educational television available to major portions of the population of these provinces. For the first time, educational television has been made available on an ongoing, continuing basis to major portions of the Canadian population around Quebec City, Montreal, Toronto, Edmonton and Calgary. It is too early to assess the impact of these efforts, but indication have been positive.

Hypothesis 3.   The postulation that numerous historical problems continue to hamper Canadian educational television developments was supported. Eight critical issues were identified as hampering Canadian educational television developments.

Hypothesis 4.   The postulation that numerous recent problems hamper Canadian educational television developments was supported. Six critical issues were identified as hampering Canadian educational television developments.

Hypothesis 5.   The postulation that the present direction of Canadian educational television is towards provincial television agencies, that have a degree of political autonomy from federal and provincial influence was supported. The individual provincial legislation establishing such agencies is very similar and could provide a direction for similar activities across Canada.

Recommendations

The results obtained in this study suggest the following recommendations:

1. The Quebec, Ontario, Saskatchewan and Alberta educational communications agencies are major departures from historical educational television developments. Each province has interpreted and applied their agency legislation in a somewhat different manner, yet the legislation is very similar. Further study of these four provincial agencies could provide valuable information and direction, not only

to Quebec, Ontario, Saskatchewan and Alberta, but the rest of Canada. Areas of importance would be the application of legislation, differences in legislation, organizational structure, and the educational impact of each agency.

2. There is a need for a more positive and closer relationship between the federal and provincial governments in the area of educational broadcasting.

3. There is a need for a more positive relationship between educators and broadcasters in the area of educational television production.

4. A greater emphasis on learning needs and learning results should be made in any educational television application.

There can be little gained in a hardware demonstration.

5. Utilization of educational television in Canada, has generally been an after thought. Utilization should be planned as an integral part of educational television production.

6. The collection, storage and retrieval of information and research dealing with Canadian educational television should be established.

7. An analysis of future directions for Canadian educational television should be undertaken. This analysis would consider possible alternatives in the provision of a national educational television service and could include, the Canadian Broadcasting Corporation, the National Film Board, the federal government and the provincial educational communication agencies.

8. The production of Canadian educational television is a very expensive activity. Greater sharing of production resources between the provinces and with the federal government should be investigated.

Wayne Blair is Media and Curriculum Consultant, Alberta Department of Education, Calgary, Alberta.

CRITICAL ISSUES IN CANADIAN EDUCATIONAL TELEVISION*

Résumé

Chapitre IV: Les questions de fond

Les questions de fond énumérees ci-dessous selon deux perspectives distinctes ont été identifiées à partir de l'étude d'un corpus constitué des ouvrages et articles relatifs à la télévision éducative parus pour ces dernières années au Canada.

1. La perspective historique

8 des questions soulevées lors de cette étude sont incidentes à l'histoire de l'évolution de la télévision éducative au Canada.

1.1 Les relations fédérales — provinciales

Les deux composantes de cette question peuvent se formuler comme suit: la réglementation fédérale relative au contenu des émission de télévision éducative; la définition que donne le gouvernement central de la télévision éducative. Généralement les gouvernements provinciaux considèrent que la télévision éducative relève de leur compétence parce que l'éducation relève justement de leur compétence, tandis que le gouvernement du Canada la considère de sa compétence parce que la radio-télédiffusion relève de la sienne.

1.2 Les relations pédagogue— diffuseur

Le problème principal que sous-tend cette question est le suivant: tandis que le pédagogue s'attend à ce qu'une émission de télévision atteigne des objectifs spécifiques d'apprentissage, le diffuseur se préoccupe plutôt des standards commerciaux de production et de diffusion.

1.3 Le droit d'auteur

Comme la loi du droit d'auteur ignore presque complètement les nouveaux moyens technologiques en radio-télévision rendus disponibles à la fin des années '60, dont l'enregistrement magnétoscopique, il en résulte une confusion nuisible au développement de la télévision éducative au Canada.

1.4 La prépondérance de la technologie "lourde"

L'importance excessive accordée a l'équipement, aux appareils plutôt qu'au matériel, aux productions proprement dites, a souvent conduit à la situation suivante: beaucoup d'inventaire d'équipement, peu de véritable apprentissage.

1.5 L'utilisation et l'exploitation

L'utilisation des émissions de télévision n'a pu s'effectuer adéquatement en raison des problèmes suivants: incompatibilité entre les horaires du diffuseur et du récepteur; absence d'appareils récepteurs convenables; insuffisance de matériel didactique d'accompagnement approprié. L'utilisation de l'enregistrement magnétoscopique a apporté quelques solutions à ces problèmes, mais elle est encore trop peu répandue.

1.6 Les coûts

La mise sur pied d'un réseau complet de télévision éducative est une entreprise très onéreuse. 4 des provinces canadiennes s'en sont donné un. Cela peut expliquer certains retards dans le développement de cette forme d'enseignement.

1.7 La coordination centrale

L'absence à peu près totale de coordination à le'échelle nationale permettant de mettre en commun les efforts locaux a peu favorisé également le développement de la télévison éducative.

1.8 L'évolution de la technologie

La technologie éducative évolue rapidement: cela crée une incertitude dans les milieux de l'éducation, peu favorable au dynamisme du développement.

2. La perspective contemporaine

2.1 Les énchanges inter-provinciaux

La création de l'Office canadien de Télé-Education *de même que l'émergence de réseaux provinciaux de télévision éducative laissent entrevoir la possibilité d'énchanges interprovinciaux plus fréquents et d'une coordination au niveau national plus adéquate.

2.2 La communication par satellite

L'avènement de la communication par satellite aura possiblement de fortes répercussion sur le développement futur de la technologie éducative.

2.3 Le choix d'un modèle de télévision éducative

L'existence de 4 réseaux provinciaux de télévision éducative pose d'ores et déja le problème du choix du modèle le plus approprié d'un organisme de télévision éducative. C'est eu égard à la clientèle que chacune des provinces aura à fixer son choix.

* *Agency for Tele-Education in Canada.*

2.4 L'information et la recherche

Les bibliothèques universitaires et les organismes nationaux d'information se sont, semble-t-il, peu préoccupés de rassembler les éléments de recherche quant à la télévision éducative et de les rendre disponibles.

2.5 La production de matériel télévisuel

La mise sur pied de 4 réseaux de télévision éducative a favorisé la production de matériel éducatif télévisuel. Mais ce type de production est onéreux. Il serait donc raisonnable d'examiner le rôle que l'O.N.F. et Radio-Canada peuvent jouer dans ce domaine, considérant que leur capacité de production est exceptionnelle.

2.6 Les ondes UHF

L'utilisation des canaux UHF, particulièrement en Ontario et au Québec, laissent entrevoir la possibilité d'un énlargissement considérable des clientèles de la télévision éducative.

Après avoir confronté les conclusions de sa recherche — conclusions fondées sur l'examen des questions de fond explicitées ci-dessus — à ses hypothèses de départ, l'auteur formule les recommandations suivantes:

3. Recommandations

3.1 Les futures recherches sur les réseaux provinciaux du Québec, de l'Ontario, de la Saskatcheqan et de l'Alberta devraient explorer les 4 domaines suivants:

3.1.1 La législation: champ d'application

3.1.2 La législation: particularités d'application

3.1.3 Structures d'organisation et de fonctionnement

3.1.4 Impact pédagogique

3.2 Les relations entre le gouvernement central et les gouvernements provinciaux devraient être à la fois plus intenses et plus positives.

3.3 Les relations entre le pédagogue et le diffuseur devraient être réexaminées dans une perspective plus positive.

3.4 On devrait mettre davantage l'accent sur l'étude des besoins de la clientèle et sur les résultats obtenus eu égard à la télévision quant à l'apprentissage.

3.5 L'utilisation et l'explication des produits de la télévision éducative devrait être soigneusement planifiées et non plus conçues après coup, accessoirement, comme cela a souvent été le cas.

3.6 Un système de cueillette, de classification et de diffusion des données de la recherche sur la télévision éducative devrait être mis sur pied.

3.7 On devrait entreprendre une analyse des futures orientations de la télévision éducative au Canada: les rôles de l'O.N.F. et de Radio-Canada seraient inclus dans cette analyse.

3.8 L'étude d'un système interprovincial d'échanges de matériel éducatif télévisuel devrait être effectuée.

EDUCATIONAL TELEVISION BY CATV

by Ken Everest

(In the last issue of Media Message I was interested to read an article by Mr. Dave MacDougall who wrote about Educational Television by CATV in the North York Board of Education. At the time he was a teacher in North York I was a media consultant on the other end of the cable. Therefore, I would like to react to his comments to give a balanced. viewpoint. K. Everest)

1. Request Scheduling

The points made here are basically correct for teachers who run a student-centred program in their classes. These teachers feel the need to control the timing, rate, and amount of each media presentation so that they can react to the students' questions and problems. For these teachers there should be a bicycle service of tapes and VTR's. However, the vast majority of teachers involved in the project seemed to prefer to have the program arrive with no "hassle" on their part. These teachers are the ones who always show the entire 16mm motion picture from start to finish without stopping, reversing, or using the stop frame feature, because it is "technically too difficult" to do any of these things.

In many cases specific requests could be reacted to on short notice. (In the 1973-74 school year only one request could not be met in any time acceptable to the teacher.) However, most requests are for a period so far in the future that the requests could even be published in the weekly schedules. Most teachers then used the request service for advanced planning rather than reacting to student needs as they occurred.

It is indicated by Mr. MacDougall that if the request is made by more than one teacher, the efficiency goes up. Also, non-linear programs such as

"Polka Dot Door" have the advantage if a few minutes at the beginning of the program are missed, the rest of the program is still usable. Both are valid ideas.

One point not covered in his article is the fact that there are not nearly enough VTR's available. The request service does have problems and sometimes doesn't work, but teachers and students do get to use programs that would not be available in any other way.

2. Reflex—Serial

"Reflex-serial" programs are by all measures the most successful programs cable cast. "Metric Canada" is available off air so it was not repeated. However, "Polka Dot Door" was repeated at the beginning of the school morning and afternoon sessions, as this series was only broadcast before (8:00 a.m.) and after (6:00 p.m.) school hours. During 1973-74, twenty-two of the 24 kindergarten teachers who could receive this program were using it consistently. The television receiver became a teacher's aide (sic), amusing the pupils while the teacher helped others out of their coats. Other programs that were scheduled for a specific time each day were also well used.

3. Preview of 16mm Films

Mr. MacDougall is correct in pointing out the distortion introduced by showing film on television or television programs as films. This distortion goes two ways. A good film may come across poorly when shown on television because fine details are lost and panoramas become "mud". Also, a poor film may look good on television for the same reason. (One film on the plains Indians panned by the preview committee for poor technical quality

received good reviews when shown on television. It consisted entirely of poorly constructed dioramas. Each teepee was casting three shadows on the sky. On television the shadows faded out and the poor construction was too small to notice so the scenes appeared far more realistic than they did on a large screen.) For this reason the television viewers were asked to rate the films for purchase "based on suitability and relevance" of the content only. Regular screening committees saw every film projected on a large screen.

The key factor in obtaining valuable feedback from this type of previewing is having a professional person to talk to the teachers and librarians to encourage them and answer questions. When the consultant in charge left and was not replaced, the number of completed cards dwindled and the previewing was discontinued..

4. Professional Development

The points made by the teacher about professional development are correct. Canned programs proved to be uninteresting to the teachers. However, the locally produced programs on art and mathematics were well received. Therefore, in 1974-75 the programming moved away from canned programs and towards locally produced programs. The most successful format proved to be a lunch time, twenty-minute panel or explanatory program, followed by a live phone-in show.

Another successful type of program (Area Code) involved each superintendent in turn explaining what he exptected to be done in his schools, what he looked for in schools, and where he thought education was heading in the next few years.

5. Public Relations

Again Mr. MacDougall is correct. Because the signal goes into the homes, as well as schools, this is an excellent method of sending a message to parents and the community. Great repsonse was received from any program that included students.

One-half inch port-a-pak tapes seem like an ideal way for schools to share experiences with each other and with the community. Unfortunately, the tapes created many problems. Most of the port-a-paks in the schools would play back quite well through a single television receiver or even through the school's internal distribution system, but their sync pulses were enough off specification that the tapes produced on them would not play through the CATV system. The signal would leave the head-end with acceptable quality, but would break up at the first line amplifier, because of the uneven sync pulses. At first this was overcome by playing the tape on an EIAJ VTR into a 26" studio monitor. A studio camera was focused on the monitor's screen and the camera signal feed into the CATV system. This worked, but gave poor definition.

When a time base corrector (TBC) was added in 1973, port-a-pak tapes could be played directly into the system. The advent of colour in the fall of 1973 meant the TBC could not be used so, again, school produced port-a-pak materials became impossible to cable cast. The equipment added in 1975-76 has again made TBC's useful. Now school produced port-a-pak tapes can be used. Through the entire time, one Sony Video Rover 3400, owned by the department, was carefully handled and maintained to specifications. This was used for special productions such as Christmas choirs. Tapes produced on this machine would play on the CATV system.

6. Conclusions

The use of the cable to cable cast serial programs, such as "Polka Dot Door", is certainly of high priority. The use of teacher committees for feedback will help with scheduling and other problems. The system can help in professional development and in community awareness.

The one conclusion that I cannot concur with is the recommendation to phase out the request service. It may be that the cost effectiveness per pupil seems low, but it is much cheaper than placing VTR's in all the schools. Until such time as VTR's are as common as 16mm motion picture projectors are today, the system can continue to place specific programs in front of specific students at the time they need that material.

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HOW TO PREPARE THE SLIDE PROJECT

by Joseph M. Barre

This is a brief description of how to organize and carry out the photographic project required in tape presentations. The 2" x 2" slide set and tape accompaniment has been selected as a project because of its simplicity in comparison with other photographic media.

Making the Community Part of the Classroom

Studying the local community. The facts and principles of history, science, mathematics and English as found in our local community are rarely studied in the classroom. We have excellent textbooks, motion pictures and filmstrips on national problems, but the professional writers and photographers can't afford to make teaching materials on a local community. The number of sales would not be large enough to support their efforts.

Yet the most vital occurrences to most students and teachers most of the time are local. Even when studying national and world affairs, the local community is a convenient "microcosm" serving as a laboratory for a first-hand study of many principles of living that are universal the world over. How rich our class learning becomes when we use our community as our laboratory! Field trips and local speakers are highly effective. School museums can display and offer for use many items obtained near the school. Dramatization is a great help in the reconstruction of important milestones in the community's history.

Producing 2"x 2" slides. There are additional ways to bring the community to the classroom — dramatically, colourfully. One way is the production of 2"x 2" slides with accompanying narration on tape. These slides are effective, easy to produce, and practical to use.

They can amount to "an edited field trip" by pictures. A slide series can be selective of learning facts, the sequence can be effectively planned and materials can be reviewed without difficulty. This article describes how to make 2" x 2" slides with accompanying narration on tape.

In examining the local community for projects, in planning the photographic work, in getting the pictures, all the members of a school class can gain valuable information and understandings. The study of the selected topic becomes more interesting when photo-

graphic documentation is part of the work. At the conclusion of such a study, the group has something to show for its efforts and feels proud to share the results.

Producing the narration on tape. The fact that the tape narration is separate from the pictures has some advantages. For example, the finished set of teaching pictures may be useful at different age levels with different narration. Pictures themselves cannot always be classified for use with only one age level, and neither can many other experiences in life. For example, an adult may take a walk through town to evaluate the quality of the advertising display in store windows. A child may walk along with him and learn the identification of many things by looking and asking questions which can be answered simply. Perhaps an older brother of the child might go along on the same walk and gain knowledge on a more mature level. Each has learned at his own level through the same apparent set of materials. The verbal interpretation of this experience by the adult, the child, and the youth will be made each on his own level. Likewise, a picture series can frequently be made to serve the varying needs of several class groups by modifying the narrative description.

When the teacher and his class of students plan a slide series, they gather all the information, organize their presentation and make their own tape narrative, learning goes forward with a clear purpose and a concrete goal.

Selecting Projects

In selecting an idea for producing a set of sound-slides, the teacher should keep in mind the following criteria:

1. Is this an important local problem for the group to study?

2. Can an amateur photographer-educator make an educational contribution by studying and photographing the problem, or has the topic already been adequately covered by professional producers

of slides, filmstrips or motion pictures?

3. Can the idea be presented effectively through the use of 2″ x 2″ slides and tape?

4. Will the teaching value of the finished product probably be commensurate with the cost of producing it?

5. Will the students learn important things while producing it?

6. Is the equipment available for producing it?

7. Will there be sufficient time available to do a satisfactory job?

Using these as basic criteria for selecting a topic, the next step is to discover projects that will meet the criteria. To discover good topics one needs to set up a schedule for studying the local community. In his book The School and Community by Edward Olson, a schedule is suggested for studying the local community. This includes the following:

1. Physical setting of the community. Here are included such topics as climate, size and general characteristics of the community, topography, soil type and fertility, water resources, mineral deposits, forests and natural resources. These topics are usually studied in courses in geography and science.

2. The human setting of the community. Included under this topic are population, the education status of the community, occupational status, nationality pattern, racial minority groups and the class and caste structure.

3. Community process and problems. Under this heading comes the use of the natural environment, including the wise use and misuse of the land, the sea, and resources. Also included here is appreciating the past.

From these suggestions can come a

large number of specific topics for a set of sound slide films.

Following are a few such topics, although each teacher will do better by analyzing his own needs and selecting his own topics.

Art:
Types of architecture in our city.
Murals in our public buildings.

Science:
Trees native to our area.
Flowers native to our area.
Birds of our community.
Geological formations of our area.
Our local water supply.
The work of our oceanographers in our area.
Our city's health department activities.
Soil conservation practices in our community.
The work of our county health nurse.

Occupations:
Part-time employment opportunities in our community.
How people in our community make their living.
Dairy farming in our neighborhood.

Social Studies:
The history of our school.
The history of our community.
Old canons of our area.
Transportation in our community.
Housing in our province.
How our village or city is governed.
Our local Community Chest services.
How our city departments function (water, fire, police).
Recreational facilities of our community.

Mathematics:
The everyday use of mathematics.
Practical illustrations of fractions.
The use of geometry in our community.
The Metrication System.

Literature:
Background information for stories written about our area.
Scenes to help interpret nature poems.

The slide project is actually a handle by which a study of the community may be made. The photographic project acts as a catalytic agent to make the study seem more worthwhile and give it a production goal. It also makes a contribution to the study by facilitating the sharing of experiences at the close of the study.

Planning the Script

After selecting a topic the details of planning can begin. The planning and writing of the script can be done in three steps:

(1) The preliminary outline
(2) A list of individual pictures
(3) Making a "sketch book" or "storyboard".

The Preliminary Outline. This outline consists of a general discussion of what is to be done. Included is a clear statement of what purposes are to be achieved by the project and what audience is to see the materials after it is made. Both should be clearly understood by everyone and put down in written form so that the group making the slide-tape set has an exact understanding of what the project is about.

The problem needs to be limited so that it can be covered well. For example, "The Story of Mathematics" could well be narrowed down to "The Principles of the Lever" or "Everyday uses of Arithmetic".

Also included in the preliminary outline is the story of the production. For example, the story might be to show Johnny as a 9th grade student asking his parents and neighbors why he should study arithmetic. The picture series illustrates the answers he receives from them. The summary is brought in by having Johnny tell a doubting classmate what he has discovered.

This story, when written down, can be discussed by the teacher-student planning group and a common agreement on procedure can be developed.

A List of Individual Pictures. The next step in planning the script is planning the pictures to be taken. Sets of teaching slides range from 15 to 80 in number, depending on the length of the story and the completeness with which it will be told. For example, a picture series on "Everyday Uses of Arithmetic" might show several scenes on the need to figure interest on a savings account, on installment buying, and in buying government bonds. The group may decide that several pictures are necessary to emphasize any one of these points. Many additional ideas are developed in the process of drawing up this chronological list of pictures to be taken.

The need may be seen for typewritten slides at different places in the set for presenting brief outlines, titling sections of the story, giving location of scenes, and spelling out new or technical words and phrases. Interest can sometimes be created by asking questions which will be answered in the next series of slides. Most of the explanation, however, can come in the narration.

The sketch book or storyboard. The final stage in developing the plans is to make a sketch book. This consists of pencil sketches representing the actual pictures to be taken plus the narration which will be used to explain the picture. It is suggested that these sketches and the accompanying narration be made up in the form of a booklet. Regular typing paper cut in half serves well for such booklets. The sketches on the left with sufficient margins to allow for the binding. The commentary may be placed on the right. Sketches need not be artistic, but they should be easily understood when the photography is being done.

Many amateur slide sets are not good because planning of the type suggested above has not been done. Whatever time the group spends in planning will, in the end, save effort as well as money. Only through careful planning can a useful product be turned out. The teacher should keep in mind that the whole photographic project is to be a learning experience in itself. A great deal of subject matter will be learned by students taking part in the project.

What Equipment is Needed?

The equipment needed to make a slide-tape set is already owned by many schools. If your school does not now own such equipment, it should consider buying it. Basically, a camera and a tape recorder are required.

Camera. First, a camera of proper size for taking color slides is needed. Two kinds are suitable: a 35mm camera or an instamatic such as used in the Kodak Visualmaker. This last is found in many schools. In addition it can be used for copy work and it is easily handled by the beginning photographer.

Check the property of your school carefully and you may find that the school already owns such a camera. It may be collecting dust in one forgotten spot.

If your school does not own one the production group will need to either buy or borrow a camera. Used cameras are inexpensive. Borrowing is usually possible, since in a school faculty, among parents, or as a teacher you are almost sure to find a camera that can be used for the asking.

In the opinion of the writer, a teacher cannot afford to be without a camera capable of making colour slides. A check at the local camera shop will show that you can afford a new camera which will serve your needs at a price starting from a low of $20 and going up, of course, into several hundreds of dollars. A satisfactory camera can be purchased for around $70.

The first photographic project should be one in which all pictures can be taken outdoors in bright sunlight. Thus, the only equipment needed is the camera. If indoor pictures are to be added, lighting equipment, exposure meters and tripods become essential, or a Kodak Visualmaker kit

equipped with copy stands and flash cubes. Projects requiring such equipment should be postponed until the teacher has obtained some experience and has access to additional funds. It should ne noted that most modern cameras have built-in light meters.

The principal brand of colour slide film is available — Kodachrome 64. With this brand, as well as other popular brands, the 35mm will be returned in 2" x 2" cardboard mounts and ready for projection. Each also offers a daylight type and an artificial light type. By using the proper correction filter or light, each type can be used both indoors and outdoors.

Projection. Most schools have projectors for showing both filmstrips and 2" x 2" transparencies. Many have the popular and hardy Carousel, in fact, every school should have one. In purchasing such a projector, the size of the lamp should be at least 300 watts so that the full beauty of colour transparencies can be revealed and enjoyed.

Recording Equipment. With the advent of magnetic sound, recording is a simple task of the addition of narration and the musical accompaniment to the slide showings. The narration reduces the need for titles or text on pictures as it is found on most professionally-made filmstrips. Furthermore, with a recorder actual sounds and conversational dialogue can be added without difficulty.

Nearly every school building today has a tape recorder, reel or cassette. Many types are available at prices ranging from $35 to $125. They are not expensive considering the many uses to which they can be put. Sound recording tape is easily edited and spliced. In making amateur productions, a considerable amount of this editing is necessary.

Record Player. If background music is to be recorded along with the narration, a manually-operated record player can be used. Records for "Mood" music can often be borrowed from the school or a private library.

Recording Tips. Each tape recorder will vary as to the settings for volume and tone. Skill in operating the recorder requires practice to get the "feel" of the equipment.

Most recorders are equipped with a directional microphone. Practice placing the "mike" at various distances from the narrator. Usually the narrator should be close to the microphone, perhaps from 10 to 12 inches. Place the "mike" as far from the recorder and record player as is practicable to keep from recording motor noises. All the recording should be done in a room free from noises such as telephones, opening and closing of doors, traffic noises, and the like. A "studio" or acoustically-treated room is desirable, but not essential.

Experimentation is necessary to record background music from a record player at the proper level for the narration. Depending on the subject of your slides, dialogue can be used to build up interest and motivation. Questions can also be used effectively.

After playing back the narration, there may be letters or words which are slurred or not enunciated properly. A re-recording, with special attention to these sounds and words, may solve the problem, but if they persist you may have to revise the narration so that these words are replaced. Some individuals, for example, have trouble with words beginning or ending with the letter "s". Improper enunciation of words ending in "o's" or "t's" are often apparent in amateur recordings.

Various signals can be recorded so that the projector-operator will know when to change to the next slide. The simplest signal is a "cricket" or "snapper". Tapping a small tumbler or bell with a wooden pencil has proved satisfactory. The signal must be audible, but not harsh, shrill, or sustained. It should not distract from the continuity of the music or narration.

Splicing and editing the tape is easily done. A section of tape can be removed by cutting it out with scissors. In splicing, the two ends are overlapped and cut at an angle of approximately sixty degrees. The diagonal cut eliminates the detection of the splice in playback. Align the ends and place a piece of special Scotch splicing tape across the non-recording side of the joint. The splicing tape should be applied on the shiny side or back of the magnetic tape. Then it should be trimmed to the magnetic tape width.

Practice and experimentation with the recorder is essential for good recordings.

Shooting the Slides

Let us assume now that the camera is loaded with film, and the "sketch book" has been planned including drawings of all the necessary shots. Everything is now ready to start the picture taking. At this stage, there are still several things the amateur must know before he actually trips the shutter for the first time.

Lighting. The basic rule for lighting in colour photography is to use flat, even light and let the colours take care of contrast and emphasis. By flat, even light, we mean that there should not be an extreme range from the brightest to the darkest area in the picture. As an example, deep shadows often ruin a good picture in colour due to underexposure in that area even though the light areas are perfectly exposed.

Front lighting is preferable for beginning colour shots. As stated before, the first project should include only pictures that can be taken in full sunlight between the hours of 9 and 5 summer time. The exposure for Kodachrome under these conditions is approximately F/5.6 at 1/60 second.

Camera settings. Whether you are taking pictures indoors or out, camera settings must be more carefully determined with colour film than with black and white. The instruction sheet which comes with your colour film is an excellent guide. Keep it handy for reference and follow it.

The three camera settings you will need to adjust for each picture are:

(a) The focusing movement.

(b) The camera shutter.

(c) The iris diaphragm.

1. Focusing. At any setting of the focusing movement, a lens covers sharply some area in front of and behind the spot aimed at. For example, a lens set at 15 feet may have everything in focus from 10 ft. up to 25 ft. from the camera. Sharpness in the foreground and background is increased as a smaller f/stop opening is used.

2. Shutter speed. If the camera is hand-held, the shutter should be set not slower than 1/60 of a second. Very few people can hold a camera steady enough to avoid camera movement and blurring if the shutter speed is set at less than this speed. If slower shutter speeds are to be used, the camera should be mounted on a tripod. A good tripod will eliminate danger of camera movement. Since the slides will be projected and enlarged greatly, even the slightest blur caused by camera movement will show up.

3. The iris diaphragm. The diaphragm can be opened up or closed down to admit just the right amount of light to the film. When the camera is "stopped down" to a small opening such as F/11 or F/16, it admits a small amount of light, while an opening of F/4.5 or F/3.5 admits a greater amount of light.

Composition. Any person can produce a technically good picture is he makes the correct camera settings and keeps the camera steady. However, the picture can be technically perfect and yet not be purposeful or interesting to see. Here are some elements of good composition which help make pictures pleasing to most people:

(a) If people are in the picture, give them something to do and the scenes will be more realistic.

(b) Avoid confusing backgrounds. The camera sees indiscriminately what the eye sees selectively. This is why photographs are sometimes seen with telephone poles growing out of people's bodies. The person taking the picture saw only the subject; the camera saw the subject and the pole.

(c) Use a variety of camera angles to include low-as well as high-angle shots. The normal view is at eye level, but don't overlook low-angle shots to put beautiful sky and white clouds behind the subject and cut out undesirable background. High-angle shots can add drama to an ordinarily uninteresting view.

(d) Try to apply the "rule of the thirds". This means framing the picture in the viewfinder in such a way that, if there were two vertical and two horizontal lines dividing it into equal rectangles, the subject or main element would be located on one of the intersections of these lines. These intersections suggest good areas to place the center of interest.

(e) Framing is very important. Archways, grillwork, tree trunks, or lines of trees form a natural frame and hold the eye of the audience to the picture. Framing also gives the picture more depth.

(f) Avoid excessive areas of blank sky by including trees and clouds.

(g) Having people, roads, and trees in the foreground of the picture gives a feeling of depth.

(h) The horizon line should be either above or below the middle of the picture.

(i) Avoid unbalanced pictures such as having all tall trees on one side of the picture only.

(j) Close-up shots following medium and distant shots of the same scene add detail and interest to the story. Close-up break the monotony of many distant or medium shots. They show things more as we see them in real life.

Finally, in developing the ability to compose a good picture, look at other pictures and ask yourself why you like or dislike them. Soon you will find that good pictures follow certain rules or techniques which can be applied to your own pictures. Photography is an art which is a means to an end. the end in this case being the creation of useful story-telling pictures for teaching.

Automatic Cameras. Automatic cameras are becoming increasingly popular, and are making it possible for amateurs to shoot professional looking pictures. The cameras are equipped with an electric eye which automatically adjusts the lens for the photographer. No exposures to calculate, no settings to make, and errors are rare.

Another automatic feature of some cameras is the use of a film cartridge. Film is preloaded at the factory and merely dropped into place in a special camera. Unloading is done in like manner. All of this can be done in bright sunlight.

The instamatic camera series is a new generation of the old Kodak Brownie Box design, pre-focussed and with predetermined speeds, usually 1/40 and 1/90 seconds. The amateur photographer just aims and shoots, and with practice good slides are produced.

With this camera and an inexpensive cassette recorder, students have produced rather good slide-tape sets for the writer.

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FINANCIAL STATEMENT

September 1, 1975 — August 31, 1976

Receipts / Expenditures

Receipts:
Membership Fees	$6,652.25	
Rebate from A.E.C.T.	153.00	
Calgary Conference, 1975	419.27	
Sale of Symposium Reports	13.50	
Sale of Calgary Conference Report	5.00	
Advance from Reserve Fund	$2,095.97	
		$9,338.99

Expenditures:
Office Expenses	$2,358.86	
AMTEC '76 Advance	1,000.00	
Committee Advance		
Membership 75—76	500.00	
Membership 76—77	500.00	
Newsletter/program	400.00	
Media Message	3,375.22	
President's and executive expenses	991.25	
Refund on membership	25.00	
N.S.F. membership cheques	30.00	
Exchange on U.S. funds & service charge	5.42	
Queen's University re AMTEC — 1974—75 expenses	153.24	
		$9,338.99

Reserve Fund

Balance, September 1, 1975	$8,393.03
Less Deficit Operating Expenses Sept. 1, 1975— August 31, 1976	2,095.97
Balance, August 31, 1976	$6,297.06

BUDGET 1976—77

Receipts

Membership	$8000
Rebate, AECT	160
AMTEC '76 Advance	1000
	$9,160

Expenditures

Office Expenses			$1,800
Board Expenses			$1,500
Media Message			$2,600
Committees			
	Programmes	$600	
	Newsletter	$500	
	Awards	$200	$1,300
AMTEC '77 Advance			$1,000
Incidentals			500
Reserve			460
			$9,160

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