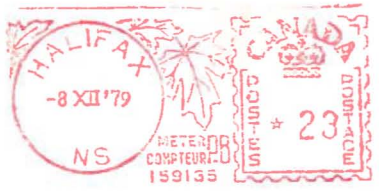
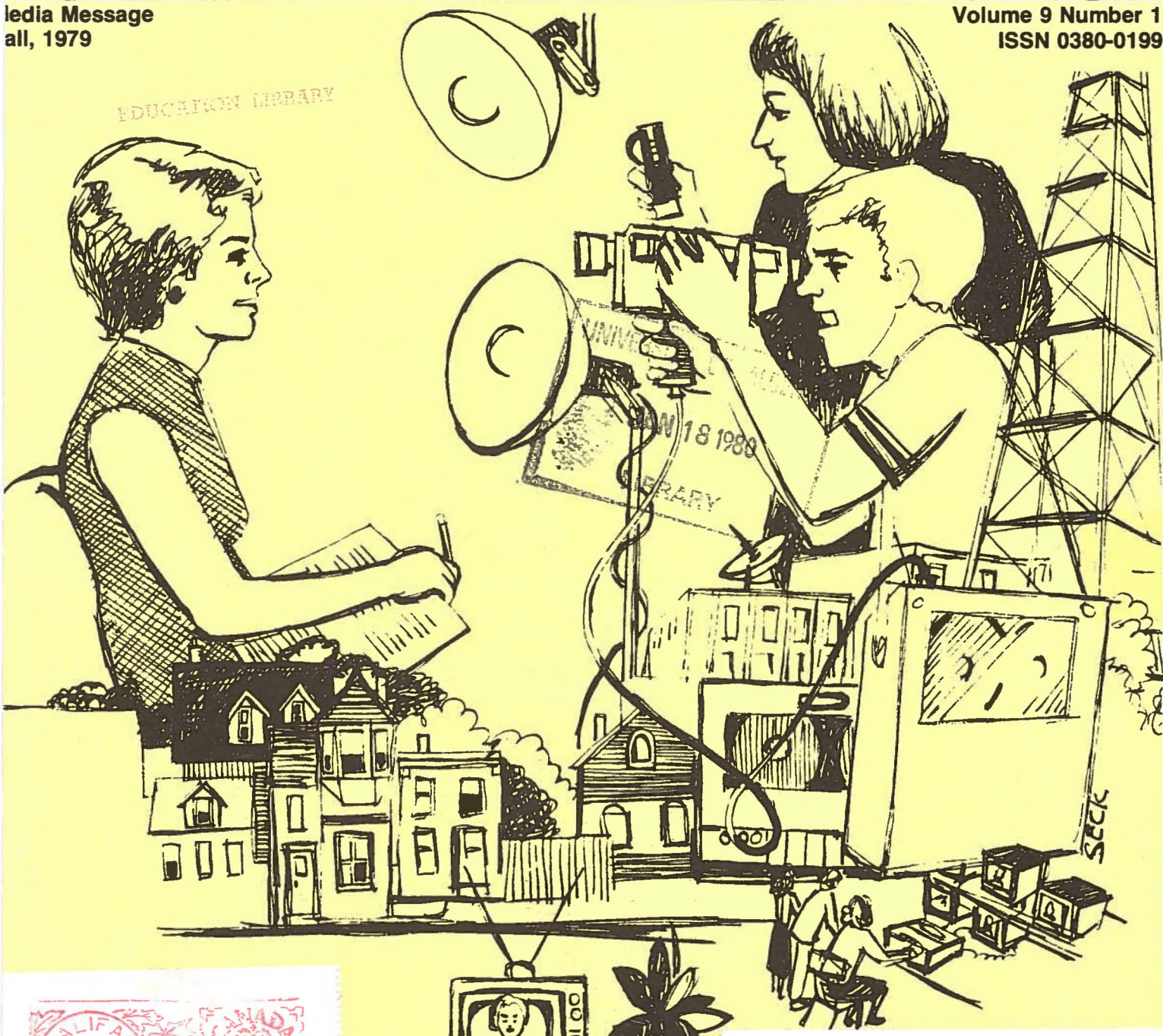


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Media Message

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Media Message

Fall Issue, 1979
Volume 9, Number 1

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PRIME TIME FOR THE INTELLECTUAL: USE OF ITV AT CARLETON

Donald A. George and June R. Landsburg

For over two decades colleges and universities in North America have had experience with the use of educational television (ITV), as a means of bringing university studies to those who would otherwise never have had the opportunity or means of undertaking them. In September 1978, Carleton University joined the growing number of Canadian universities that have taken concrete and positive steps towards increasing accessibility to higher education through a televised curriculum. Carleton's leap into the future was not, however, without precedent within the University since ITV evolved, in part, from the Faculty of Engineering's successful 1976 participation in the Stanford University/Carleton University Curriculum-Sharing Experiment via the Hermes communications satellite. This was one of the experimental communications projects of Carleton's Wired City Laboratory.

Technology in Use

ITV at Carleton is live. At present two rooms are equipped to carry broadcasts (one lecture theater and one seminar room) though, in future, it is planned that a single classroom will serve for all class broadcasts. Two Telemation and one Sony vidicon black and white cameras are utilized with one under-operator control viewing the instructor and three fixed. Of the latter, one is mounted overhead viewing a sheet of paper which the instructors use instead of a chalkboard. This camera is also used to display graphics, textual materials and artifacts. The other one provides views of the students in attendance at the lecture. Monitors in the classroom allow in-class students to view the instructor's graphics and high-sensitivity microphones are placed strategically around the room with one lapel microphone for the instructor.

A portable production unit is employed containing four nine-inch monitors, a special effects generator, and mixing and switching apparatus.

Slides and videotapes can be inserted into the program, in colour, by use of a telecine chain and VTRs.

Two student operators are required: one in the classroom operating the production unit and one in master control. To ensure that the production unit remains as unobtrusive in the classroom as possible, testing, setting up and communications between the operator and master control are handled by a telephone included in the production unit. Coaxial cable (about 5,000 feet) connects master control to a Jerrold microwave transmitter mounted on the roof of the University's 22-storey Arts Tower. The microwave system currently in use is a rather old ITFS system (2.5 GHz) utilized some years ago in an experimental information retrieval system by the Ottawa Board of Education. During the development phase of this project this unit was extensively overhauled and somewhat modified.

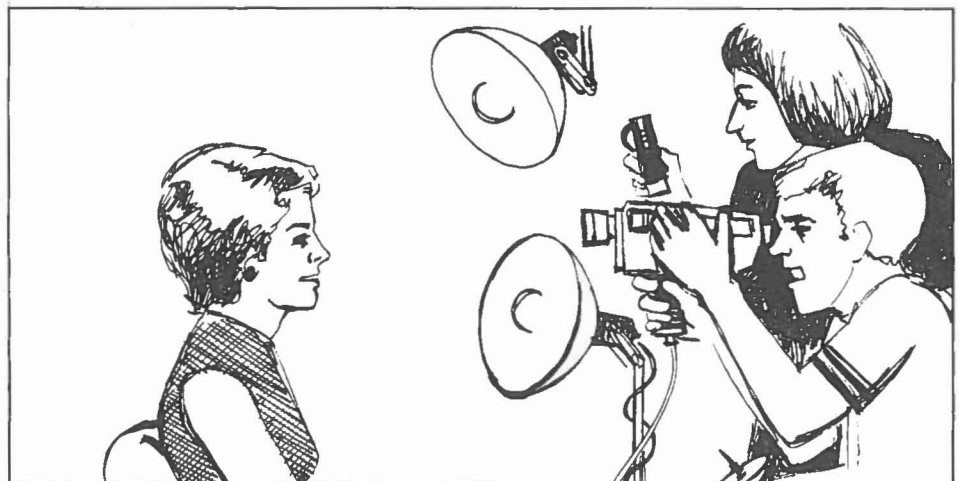
To allow for communication between the television student and the instructor, a hands-free "loud speaker telephone" is utilized which permits the in-class students and the ITV students to hear the conversation between the instructor and an ITV student using his/her home telephone. The student at home using the telephone hears the in-class students and instructor over his/her television audio system.

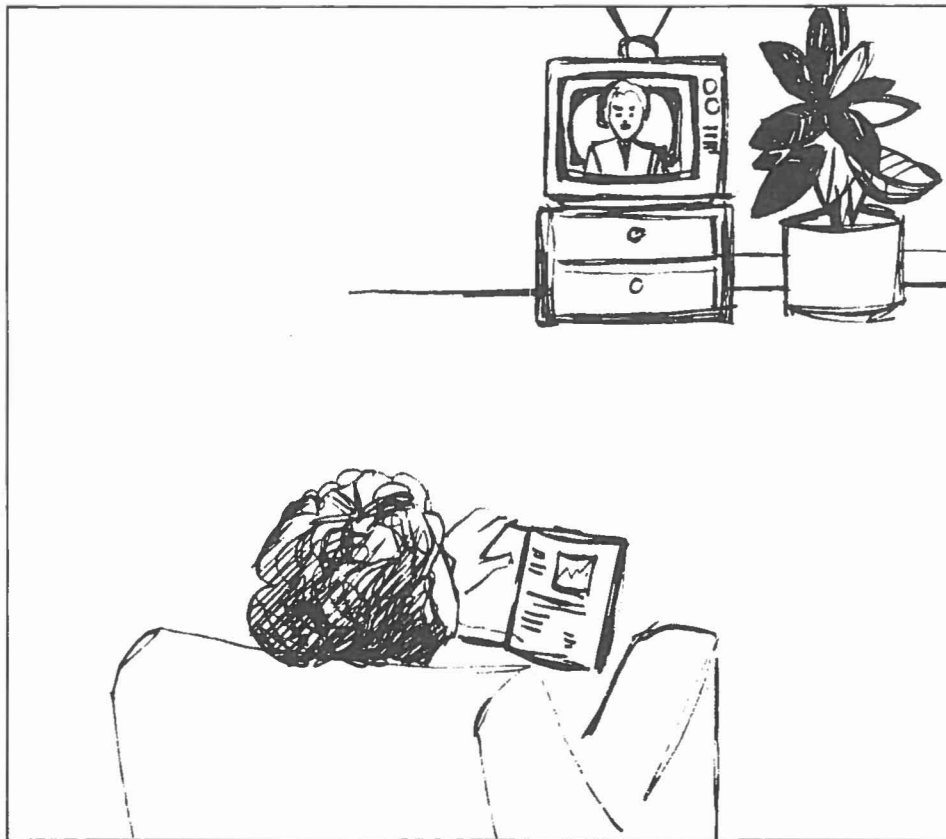
The radius of the broadcasts covers the 100-square miles making up the Ottawa-Carleton region and containing a population of one half-million. ITV broadcasts are available on converter channel 15/B to the subscribers of Skyline Cablevision Ltd. and Ottawa Cablevision Ltd. Never before in Canada has a cablevision channel been made available exclusively for instructional television.

Curriculum

The course offerings which made up Carleton's initial year of ITV programming represented what we considered a judicious and interesting mix of both the conventional and the more provocative aspects of the University's curriculum. On the one hand, traditional studies were made available in the two introductory courses in psychology and political science, as well as in the senior courses in French-Canadian and American history. On the other hand, for the more adventurous of spirit there was the history of gambling, anthropology through science fiction, ancient science and technology, and women in politics.

The planning of course offerings took into account the need for a range of levels (first to third years) and the need for courses normally required within various degree programs, since one of the principal aims of ITV is to facilitate the progress of ITV students





towards a degree of their choice. This summer's slate of courses has introduced French language instruction to ITV students, along with studies on Shakespeare and a senior course in the social history of Canada. Our Fall/Winter curriculum will feature such courses as diplomacy of the great powers, Canadian government and politics, French Canadian society, and man and his environment.

Scheduling Framework

Live broadcasts of classes are typically aired twice a week. In 1978/79 this amounted to about 23 hours of original programming each week of the 26-week academic year. Classes ranged from one to three hours in length and two rebroadcasts of each class were also made available, bringing ITV's on-air hours to about 69 hours per week.

ITV Students: Who are They?

In 1978/79, the first year of ITV programming, 273 television students completed their studies in 11 courses, accounting for 316 course registrations. Before withdrawals the peak course registration was 354 and in on-campus sections the corresponding course registrations were 581.

Homeviewers for Credit who take one or more ITV courses for credit and who watch their classes off-campus. These students numbered 162, making up 59% of the overall ITV student body.

TV Concurrents for Credit who take both conventional on-campus courses and the ITV courses, watching ITV classes at home. This was the second largest category with 100 students or 37% of the ITV students.

Auditing Students who, for a small fee, receive course material but do not perform assignments or take examinations. Such students formed only 4% of the total group, with the majority of them being homeviewers.

The in-class students in the courses televised are, of course, not considered ITV students since they are, like all other on-campus students, simply attending a course which happens to be "on-air". They do, however, derive the benefit of being able to review a lecture or view a lecture from home if sick or otherwise unable to get to the campus. Also not included in the 273

figure are those who may tune into one or more classes regularly out of interest but who never formally register with the University.

But aside from the above categories, the ITV students can be described in terms of more basic background characteristics. They are, for example, predominantly female (70%), three-quarters of whom are married. As was expected, in terms of age, roughly 40% fall within the category 30-45 years, 20% in the more traditional university age cohort of 18-25 years and 10% are sixty years or over (and consequently benefiting from the University's waiver of tuition fees for senior citizens). Over one-third of these students are new to Carleton, in all but a few cases registering as special students. This pattern of registration is also true of the overall ITV student body as well, with two-thirds registering as special students and the remaining one-third in various degree programs.

But what about the "real" ITV student body; those students who take all their classes at home because circumstances may preclude their doing otherwise? Forming the largest subset within the overall ITV population (60%), this group is again 70% female, the vast majority of whom are married (80%). As might be expected, the proportion of conventional university age students (18-25 years) drops within this subset to roughly 12% to become the same size as the 60+ category, while the proportion of 30-45 year age group increases to 46%. In terms of academic status, the homeviewers tend to be heavily concentrated in the special student category (83%) with the remainder being part-time degree students. Roughly half of these students are new to Carleton.

How Well Do Students Learn Via TV?

If the student undertaking university studies via ITV is being deprived of the intellectual stimulus enjoyed by his/her on-campus peers it is not immediately apparent in the grades the students received during the initial year of ITV courses at Carleton. A glance at the comparative distribution of grades for ITV students and their in-class colleagues reveals a striking

similarity between the two groups. Even an expected large difference in withdrawal rates fails to materialize with ITV students showing a 15.5% withdrawal rate compared to 10.5% for those in the on-campus classes. The grade pattern is as follows:



Percentage Distribution of Grades

	A	B	C	D	F	ABS*	Total Grades Assigned	
ITV	14%	32%	27%	8%	10%	9%	299	100%
In-class	16%	37%	25%	11%	5%	6%	520	100%

*Absent from exam — no grade assigned

This overall pattern also holds true for individual courses of comparable size (with, in some instances, higher rates of absences in the on-campus class).

But the aggregate data, the percentage, and the distributions of the number-crunching exercise can be misleading, for it must be remembered that the business of ITV programming is with the exceptional case, the intellect trapped in circumstances unrecognized by the conventions of higher education. To some extent, then, the validity of ITV at Carleton is to be found not in the overall data but in the case of the 29-year-old student who entered a degree program for the first time by means of ITV courses and who asserted her right to higher learning in the A grades she received. It is also to be found in the case of the second-year student who, by means of ITV, was able to secure the particular core courses she required to shift into a full-time psychology program and to prove her worth in a string of six straight A's.

Broadcasts Are Only One Aspect of ITV

The high levels of student interest and success apparent in the above grades is encouraged and made more possible by the additional forms of communication which are maintained between instructor and at-home students. Supplemental to the lectures and seminar discussions are the printed materials that are sent to ITV students, telephone office hours, occasional on-campus meetings (if fea-

ible), an *ITV Newsletter* informing students of relevant information, and the special arrangements which are made for the securing of texts by mail from the University bookstore, etc. All of these support services will, of course, require more and more refinement as we gradually come to know the needs of our at-home students, but the groundwork has been laid.

First Impressions and Future Plans

The initial year of any pilot project yields a wealth of lessons — in the crises coped with, the seemingly impossible obstacles surmounted, the dismal failures and risks successfully taken. For ITV at Carleton the lessons have been learned not only by the direct experience of trying to produce telecasts with less than adequate equipment on a very low budget, but also by the comments, complaints and suggestions which have been received from at least some portion of the homeviewers.

First impressions formed in this way are as follows:

ITV courses are providing an alternative route to university studies for those who, as homemakers, shift workers, handicapped, and senior citizens, may otherwise be excluded from conventional on-campus classes.

ITV programming difficulties, while recognized, do not seem to deter interested students.

ITV courses are serving a variety of purposes ranging from general interest studies to professional upgrading to admission to degree programs to transfer of credits to completion of programs once begun but dropped.

To some extent ITV is useful as a recruitment device since these courses do seem to have attracted a certain number of students who would not have otherwise enrolled in Carleton courses.

The academic performance of ITV students has been as good as that of their on-campus peers.

Improvements are needed in the provision of support services such as textbook purchase, library facilities, registration procedures, and learning skills instruction.

More and better methods need to be developed for increasing the communication possible between the at-home student and the instructor, the at-home student and the in-class population, and among the at-home students.

For the future much needs to be done. Aside from the necessary improvements to the technical quality of the telecasts and the support services provided to ITV students, there is the very important curriculum planning which demands not only imagination and hard work but also a familiarity with the needs, aims, preferences and expectations of the ITV student body. Decisions on future course offerings, as well as methods for their presentation, must be formed through well directed research. The next few years at the School of Continuing Education will be spent, in part, establishing a data base which can be used to shape our programming.

Looking beyond the immediate future, we hope that instructional television can realize several goals: first and foremost, the introduction of opportunities for scholarly work to those who have always been under-served by higher education; second, the enrichment of the University's own curriculum and instructional methods; and finally, the enhancement of the University's presence in the Ottawa-Carleton community.

A former dean of the faculty of Engineering at Carleton University, **Donald A. George** is a professor of systems engineering. His interest in the combination of communications technology and education led to the successful Wired City Laboratory at Carleton University which, among many other research activities in the early 1970's, pioneered live post-secondary course exchange between Stanford University in Palo Alto, California, and Carleton University in Ottawa via the Hermes satellite.

Dr. George is currently Director of the School of Continuing Education at Carleton. Under his direction, an instructional television system (ITV) began operation in the fall of 1978, broadcasting eleven credit courses live on cable television in Ottawa and the Ottawa Valley.

June R. Landsburg coordinates the Office of Instructional Development at Carleton University. She is currently Associate Director of the School of Continuing Education and is specifically concerned with delivery systems as they relate to the learning environment and in promoting and broadening Carleton's off-campus credit program. She has been instrumental in the success of Carleton's instructional television system. A former Director of the Instructional Aids Department, Ms. Landsburg is also on the board of directors for AMTEC.

TOWARDS THE BETTERMENT OF CHILDREN'S TELEVISION

D. J. Engel

Many concerned educators are taking an active interest in the quality and quantity of television that is made available to children. These concerns are borne out by research and publications. Three major areas may be identified and the first involves current trends in research. The second, the popular press, is a look at some typical writings and the third is a direction for concerned persons.

First, research tends to be narrow and, hopefully, specific. It also tends to be repeated for various reasons. Research by industry, the television industry is no exception, is specific, commissioned and often buried. Those who commission the study utilize the results, perhaps share it on a narrow scale, and bury it; little leaks out for general consumption.

Academic research, on the other hand, is narrow, seldom commissioned and often repeated because related information is not always readily available. If it is a replicated study seeking to substantiate previous results, it shows a lack of information and is a great waste.

Current research shows considerable concern for the child and the effects of television. Items of interest

to Canadian educators include a study on the "socializing factor" and the effects of viewing television on family behavior. Another, undertaken by the University of Alaska, deals with the social and behavioral effects of the introduction of broadcast television to remote villages. A study by the University of British Columbia, Dr. Tannis Williams, established that children in communities without television read better than their viewing counterparts. (Williams: 1977)

In this same vein, Paul L. Houts, editor of the *National Elementary Principal*, discussed in "The Ecology Education: Television", four points for educators to bear in mind. (1) Regard television as an important, creative, even indispensable instructional tool. (2) Make a much more concerted effort to prepare principals and teachers not only to use instructional television wisely, but to tap the educational opportunities that commercial television offers. (3) Work with parents to regulate children's viewing; help children become more discriminating. (4) Begin to take television seriously. (Houts: 1977-5-6)

Houts observes that "the education community has all but ignored television... one explanation is that today's teachers and principals grew up in a time when printed material was still the source of MOST information, certainly the primary source of scholarly information. No matter the reasons, as educators we ignore television at our peril. Children are shaped by what they are exposed to outside the classroom. And what that is, like it or not, is an increasing diet of television..." (Ibid.)

Let's turn to point number two, the popular press. A discussion stirring book is *The Plug-in Drug* by Marie Winn. Ms. Winn reinforces the idea of dependence — becoming addicted to the tube. "Whether the program being watched is 'Sesame Street' or 'Superman', 'The Ascent of Man' or 'Popeye', there is a similarity of experience about all television watching. It is easy to overlook a deceptively



simple fact: one is always *watching television* when one is watching television rather than having any other experience." (Winn: 1977: 3-4)

A second book of interest is Terry Galanoy's *Down the Tube*. This is a charming book, a book that will capture your attention with chapter after chapter of light reading about the making of TV commercials. The final chapter however is where he exacts his due, where he delivers the message, where he unveils the "dog eat dog" market place.

A third point is based on action: What can be done? What can parents, teachers and other concerned adults do? Become aware; then voice your concern. A concerted group is more readily heard by those who control television than an individual, but by all means speak out as an individual. Let the producers and advertisers, the stations and the networks know when you are displeased *and* when you are pleased. Be aware, that's important. And let those in charge know that you are *aware*.

As a step toward joining together the three aforementioned points (the research, the popular press, and the concerned/aware users of television in our community, the global village) the International Television Research Information Centre has been established at the University of Alberta. The Centre, housed at the Faculty of Education, is engaged in collecting research information regarding television and its effects on children and young adults, scanning the popular press through a wide network of correspondents, and disseminating information in the form of tailored bibliographies. Materials are currently being prepared for producers, consumers, teachers and students. Writers, directors, researchers and parents have all participated in the past. In the future it is expected that the Centre will be supporting research to fill those gaps identified by scholars, laymen, authors and producers of children's television.

For further information contact:

ITRIC
NB-125 Education North
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Edmonton, Alberta T6G 2G5

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Dr. D. J. Engel is an associate Professor in Instructional Technology/Educational Media in the Department of Secondary Education at the University of Alberta, Edmonton. In his present position, Dr. Engel is responsible for television courses involving studio production, directing, writing, and research. He also directs the International Television Research Information Centre.

LEARNING FROM CABLE TELEVISION

Michael G. Jeffrey

If you were given the choice of deciding among three treatment conditions for a learning program via cable television, which would you choose:

- T1: Individual Home Viewing; or,
- T2: Individual Home Viewing supplemented by Seminars; or,
- T3: Group Viewing with Open Discussion?

As a media person, which would you deem to be the most effective presentation technique?

The Pilot Project

During the Fall and Winter of 1978, part-time continuing education instructors in Kings County, Nova Scotia, participated in a novel in-service project. Forty-three participants were randomly assigned to the above treatment groups to view cablecasts of the six-part video series, *Effective Teaching Techniques*. One program was cablecast each week on the experimental educational channel of Kings Kable Limited. Immediately preceding and following the six-part series, participants in T2 and T3 attended separate introductory and "wrap-up" seminars, respectively. A control group consisted of twelve instructors from outside the coverage area of Kings Kable Limited.

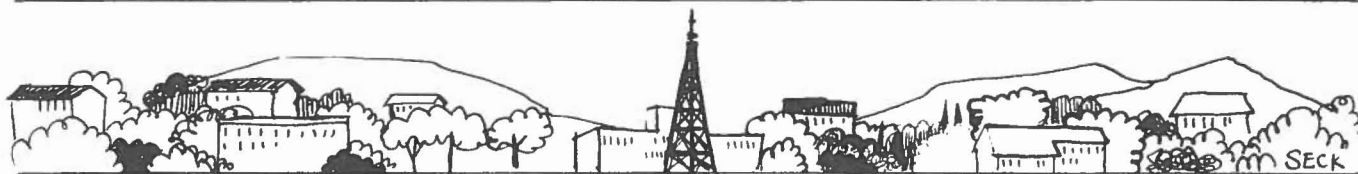
The evaluation format consisted of two parts: a pretest and post test evaluation completed by students of in-service participants; and weekly questionnaires completed by participants after viewing each of the six programs in the series. Each ques-

tionnaire consisted of a series of stems (statements) followed by five alternate responses ranging from "Strongly Agree" to "Strongly Disagree".

Effect of Treatment Group

Overall, there was no significant interaction between assigned treatment and pre-post treatment test results: the treatment assigned to participants appeared to have no effect on test outcome. Cable television was perceived to be a good vehicle for in-service training and viewers agreed that other professional development programs should be shown on Cable TV. There was, however, disagreement about the need for supplementary reading material. The perceived need for group discussion of program content was ironic: T1 saw no need for discussions; T2 was neutral; and T3 felt that discussions were necessary. (Jeffrey, 1979)

It was anticipated that instructors, reared in traditional in-service programs with structured discussions, would have responded more strongly toward a group-centered treatment, and against the isolated treatment of T1. It was not surprising that T2, which was a compromise position between total isolation and the group-centered design, resulted in a neutral response to the need for interaction with other instructors. This seems to indicate that program users will be content with any treatment condition assigned to them. The acceptance of this suggestion has implications in the current mood of



fiscal restraint — if all treatments are equally well received, it behooves us to choose the least expensive delivery vehicle. Clearly, individual home viewing/instruction becomes very attractive because of the elimination of travel cost, space rental, instructor time and participant time (a one-hour video program only consumes one hour of free time, whereas a traditional one-hour program could add over an hour of participant's travel time and costs).

This conclusion must be tempered by program objectives. If the objective is the pure dissemination of knowledge (whether cognitive or affective), then the least expensive in-home use is indicated. However, if the objective is to provide some instruction balanced with a lot of social interaction, the traditional design must be chosen. (Here, the large number of clients of continuing education programs who report that their aim is to interact with other people, to "get out of the house" must be considered. For them the course of instruction is only a convenient vehicle for that interaction.) Cable TV will not replace this activity. Finally, if the objective is to master psychomotor skills, television can only be part of the solution because skills are only mastered by repeated, actual practice. Television can, and in fact does, provide the initial demonstration of a skill.

Change in Learner Behavior

This in-service project did have one disappointing finding — there was no significant difference between pre-treatment and post-treatment evaluation by students of in-service participants. Perhaps the video series was ineffective; perhaps the participants already applied the program content; or perhaps the evaluation instrument was ineffective. In the first instance, pilot testing of the series indicated its effectiveness with both faculty and graduate assistants. (Orme, 1978). In the second, questionnaire responses by instructor participants and their students indicated that the techniques,

in general, were applied. The evaluation instrument is then suspect and, in fact, some respondents reported difficulty interpreting the multiple-response format.

This raises important questions concerning appropriate vehicles for evaluating the effectiveness of televised, or indeed, mediated instruction. In applications to skill training in adult education, in Nova Scotia (e.g. cooking) the effectiveness of a presentation is obvious. If the learner is seeking to "make pies and pastries", his actual product (pie) can be evaluated by a competent pastry chef both before and after viewing the audio-visual presentation. However, in the more affective areas, like teacher training and personal development programs, what instrument is a suitable substitute for observation of the participant "in action"? I would prefer personal "monitoring", but if cable TV is applied to program dissemination to viewers who are geographically isolated and dispersed, how can personal observation be both reliable and cost-effective? Some might suggest that we simply test viewers on the acquisition of content knowledge, but this would severely weaken the application aspect.

Conclusion

The results of the in-service project have suggested the potential of cable television for cost-effective dissemina-

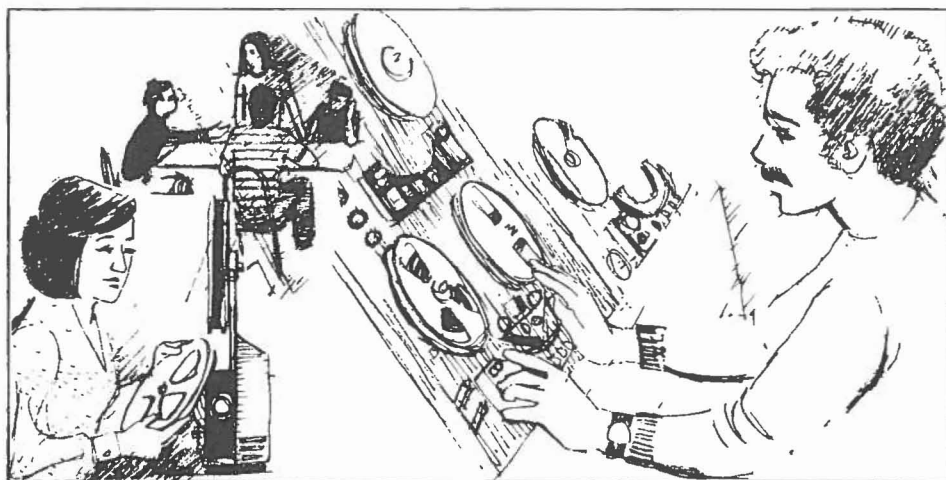
tion of programming to users in the home, office, or any desired viewing area. "Cable" is more attractive than "broadcast" TV because of the increasing quantities of small format programs being produced. In addition, the many channels accessible to cable TV (or satellite networks) permit convenient scheduling and re-broadcast of desired programs independent of audience size. However, if such growth is to be meaningful, a practical and useful evaluation process must be found. That is our challenge and our responsibility to the use of media and technology in education in Canada.

Thanks are gratefully acknowledged to Mr. J. Phipps, Ryerson Polytechnical Institute, for permission to cablecast the series, "Effective Teaching Techniques."

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Michael G. Jeffrey is an advisor/producer for Education Media Services, Nova Scotia Department of Education. He received his master's degree from Dalhousie University.



PRESIDENT'S MESSAGE

Kenneth L. Bowers

What are the issues facing AMTEC? The Executive Board spent two days in Toronto on October 25 and 26 discussing some of the issues, those raised by the Board members. Among those discussed were the following: AMTEC '79 in Ottawa; AMTEC '80 in Edmonton; future AMTEC conventions; the AMTEC budget; membership; international affiliation; archives; AMTEC history; publications; nominations for AMTEC Board; copyright; constitutional revision; AMTEC priorities. In this column I would like to report to AMTEC membership on the Board's consideration of some of these issues. Some are ongoing in nature and will be recurring at each Board meeting. If you are a member of AMTEC and feel moved to make your position known on any of these, or other important matters, contact any of the board members, so they can better represent you at future meetings. The Board will be meeting again in Feb-

ruary to take further action on the important decisions. For this column, no effort has been made to place topics in any logical, chronological, or psychological sequence.

AMTEC '79

Board Member June Landsburg was also conference chairman for the 1979 conference in Ottawa. She provided board members with a complete report on the conduct of the conference from her perspective. Also distributed to each Board member were reports from the chairmen of each of the major committees involved in the conference. One copy of all materials, plus tape recordings of the sessions so recorded, were provided for the archives. Our new *Media Message* and *Newsletter* editors may see fit to print some of these materials in quoted or summarized form in future issues of the publications. Of special

interest to the Board, and to the members of AMTEC in general, was the information that AMTEC '79 resulted in a sizeable profit. This balance on the black side of the ledger was a tribute to the hard work and astuteness of the Ottawa conference people in getting financial and other kinds of support from many sources. They have set an enviable example for subsequent conference organizers.

AMTEC '80 — Edmonton

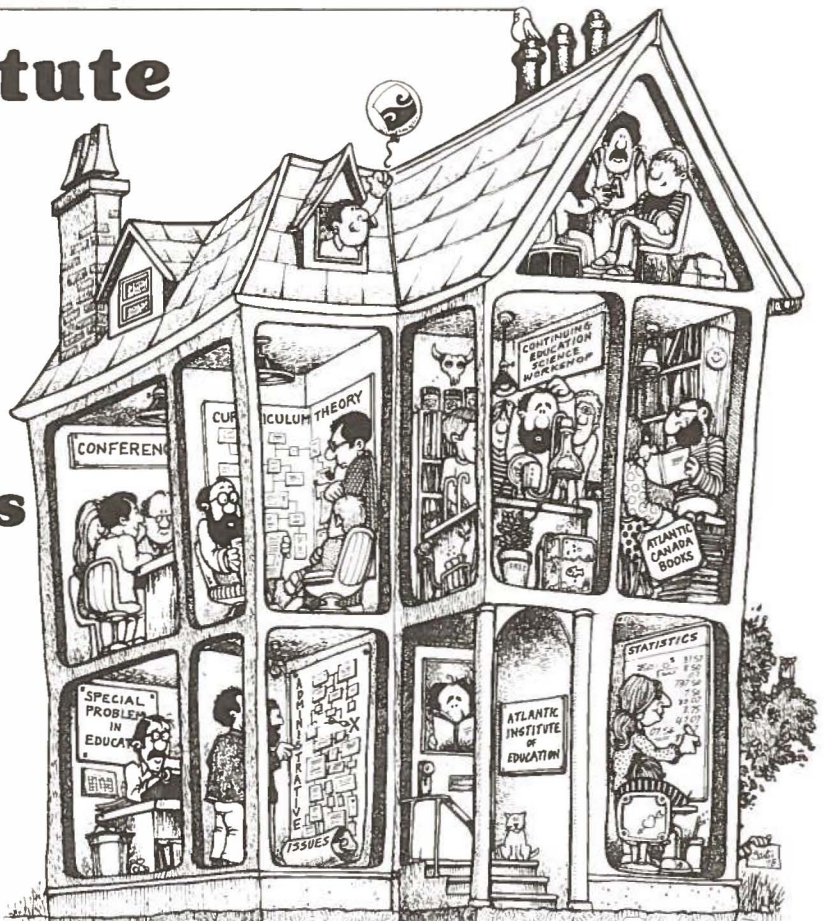
The AMTEC '80 conference will be held at the Hotel MacDonald, where space for sessions, exhibits, and conferees has been reserved for June 15, 16, 17 and 18. Hans Kratz, conference general chairman, has appointed twelve committee chairmen who are all making plans for various aspects of the conference. The Publicity Committee has been active, as several announcements in the Summer Issue, 1979 *Media Message* indicated. A tentative budget has been struck, indicating that commercial

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sponsors have already committed several thousands of dollars. The City of Edmonton and Province of Alberta have already agreed to sponsor functions related to the conference, and other sponsors are under consideration. The Program Committee is trying to organize a balanced conference, with most media interests considered without a heavy concentration on any one medium at the expense of any other. It is hoped that some unusual events will be included, although the final arrangements have not been made for some of the most unique media events. We hope that AMTEC '80, as we explore Entering the Eighties, will be a superlative experience in every way for all who attend.

Future AMTEC Conventions

What lies beyond AMTEC '80? Larry Burt, immediate past president, was not with us in Toronto to indicate how plans are progressing for our 1981 conference. He was busy in Truro, taking care of the many problems associated with moving into a new building. We will be looking forward to seeing the results of his efforts when we meet in Truro, Nova Scotia for AMTEC '81.

We plan to meet in Manitoba in 1982. The media people in that province are laying plans for our first conference in that province at that time.

Beyond 1982, the Board would like to encourage local groups to invite AMTEC to your area. The stimulation of a media conference in a city results in many advantages for the local media efforts. Is your area interested in a future conference? Let an AMTEC Board member know.

Other issues facing the Board will be reviewed in future issues of *Media Message*. If you have particular interests regarding the AMTEC budget, membership procedures, international affiliation, propagation or use of our archives, AMTEC history, the *Newsletter* or *Media Message*, nominations for next year's Board, our position on copyright, constitutional revision, or AMTEC priorities, please write to me or a board member. Let's communicate.

EDITOR'S COMMENT

Richard F. Lewis

A new editorial team has taken over in the current issue of *Media Message*. Richard F. Lewis, research associate at the Atlantic Institute of Education in Halifax, is the new editor. Richard received his Ph. D. in educational technology in 1973 from Syracuse University. His research interests centre on evaluation problems, particularly in the areas of second language training and television programming.

Patricia A. Lewis, the new managing editor, received her Master's Degree in Journalism from Syracuse University in 1971. She has written, edited and designed a number of educational, commercial and governmental publications.

Lois Baron, a new associate editor, received her Ph. D. from the University of Toronto. She is currently an assistant professor of education at Concordia University, Sir George Campus

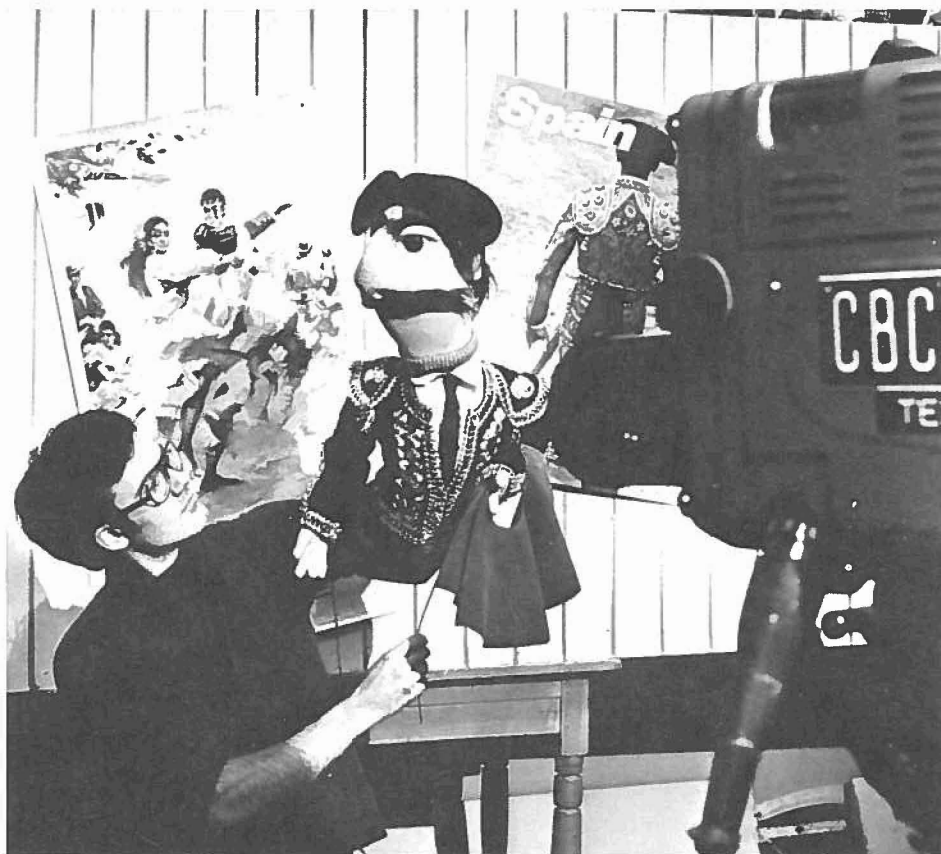
Dave MacDougall, past editor of *Media Message*, will continue to assist the editorial staff.

Media Message as a publication for a media association should reflect in its design and content some of the newest thinking in the visual field. In this, our first issue of the journal, we have tried to change appearance and format to reflect this goal.

Every issue will attempt to feature one particular aspect of the media field. In this issue we are emphasizing television, but future topics include evaluations of programs, computer technology and its application, futuristic applications of technology and their impact on education. Secondly, every journal will report special interest group information, such as that compiled by Clayton Wright.

The *Newsletter* also reflects a change in editorial philosophy. The "Viewpoint" column will carry a full-length article on a person or issue of note. Various announcements and news shorts will also be published.

Finally, both *Media Message* and the *Newsletter* will adhere strictly to deadlines.



SPECIAL INTEREST GROUP MEDIA INSTRUCTORS

Coordinated by Clayton Wright

The aims of the Special Interest Group section in *Media Message* were to exchange information on basic media courses, and to improve the quality of teacher training in media use. This section attempts to answer the following questions:

What is a basic media course?
Where does instructional design fit?
How do we best motivate the student in the basic media course?
When should the basic media course be given?
What can be done through AMTEC in this area?

Anything of interest to media instructors should be submitted December 31 to:

Clayton Wright
Education North, B-125
University of Alberta
Edmonton, Alberta T6G 2G5
403-432-4922

1

Microcomputers have the potential to support or supplant a number of the CAI computer functions presently being carried out by large computer systems such as PLATO and TICCIT. Radio Shack TRS-80, PET and Apple II are being purchased by everyone. Interest in CAI and in general computer science has rekindled with the advent of these small machines. Their popularity owes a great deal to such factors as low capital investment, low maintenance costs, portability and availability of software.

Unfortunately a program produced for one device is generally not compatible with another. Furthermore, the quality of such software, while acceptable to the private user may not meet the standards demanded by the conscientious educator. Often this is not recognized until after purchase agreements have been made. Standardization and quality control are needed in the industry so that educators may make use of excellent programs created by others.

2

The Media Think Tank is a group of concerned Albertan media educators who meet on an irregular basis to discuss issues of importance. Participants include individuals connected with school boards, universities, Departments of Education, ACCESS, The National Film Board and commercial enterprises.

The Media Think Tank is not a formal organization. There is no president, no dues, no constitution and no money. Minutes of each Think Tank are not circulated to participants and non-participants. The deliberations have been for the most part a "hats off" affair, although they have been of an intense professional nature.

The topic "Defining Our Boundaries" was deemed important by participants of Media Think Tank #4. It dealt with who was doing how much of what, why they were doing it, and should they bother at all, as related to the variety of media activities currently going on in Alberta. This topic occupied the morning session. The second topic, "Five Years and Counting" was considered in the afternoon session.

The key organizers of Think Tank #4 were Barry Eshpeter, Bill Hanson, John Stoeber and Phyllis Berck.

Perhaps there are other similar groups around the country. If so please send us some information.

3

The first real breakthrough in audiovisual technology in the last two decades is here — well, almost. Videodiscs and players incorporating laser beams are now being distributed by Magnavox in the United States. By the fall of next year, Canadian franchised dealers will have them in stock. They produce excellent quality pictures for their size, are compact, easy to operate and have random access capabilities to 54,000 frames of information on one side of a 30-minute disc.

Soon, RCA and others will have available a videodisc player that incorporates a tone arm similar to an audio turntable. The later version (contact stylus) would be \$300 - \$400 cheaper than the laser beam player and will permit a cheaper method to be employed for videodisc duplication. However, it has its drawbacks since wear due to friction on disc and stylus will be a problem, and it will be virtually impossible to have single frame advance.

Irrespective of the format, just think of the possible uses — in distance education, for microcomputer interfacing, for rapid information retrieval . . .

4

While students hold up cards with their names clearly printed in felt pen on a white sheet of paper, take their

UNIVERSITY OF VICTORIA

Faculty of Education

Applications are invited for a position in Educational Media at the Assistant or Associate Professor level. Advanced degree in Educational Media, at or near Ph. D., and school teaching experience required. Duties include teaching courses in educational media at the undergraduate level; supervising student teaching; coordinating some technical services; and providing leadership in the development of graduate courses and programmes. Appointment effective July 1, 1980 or July 1, 1981. Send full curriculum vitae and names of three referees to Dr. R. D. Armstrong, Chairman, Department of Communication and Social Foundations, Faculty of Education, University of Victoria, P.O. Box 1700, Victoria, B.C. V8W 2Y2 before December 31, 1979.

photographs on black and white film. A film like TRI-X can be used under the lights normally found in the classroom. The film can be easily developed and contact printed, thereby permitting you to have pictures and names of a class of 36 on one 8" x 10" sheet. Only 10 minutes of class time would be required.

5

Students could make their own free standing name plates at the beginning of the year. Not only does it facilitate the learning of names but also it provides a practical exercise in audiovisual material preparation.

6

Many small television stations discard their commercials after their expiry date. If you speak nicely to them, and are willing to arrange the pick-up and delivery of the tapes, they could be yours. The commercial tapes can be used for editing exercises. Large television stations tend to use 2 inch videotape which obviously must be dubbed to a width appropriate for your equipment.

7

Two books that have been widely altered in content and format. The two revised books are:

Davis, Phil. *Photography*. Dubuque, Iowa: W. C. Brown Company Publishers.

Gagne, Robert M. and Briggs, Leslie J. *Principles of Instructional Design*. Toronto: Holt, Rinehart and Winston. 1979.

8

Have you seen the September, 1979 edition of *Audiovisual Instruction*? The article which described employment trends for media graduates, indicated that there was a salary increase of approximately 5% over the last year. The employment picture appears to be brighter for those interested in instructional development, business and industry. Perhaps media programs which have been oriented solely to educational needs need to be restructured.

AUDIOVISUAL TECHNICIAN PROGRAM

Dave Milner

The Audiovisual Technician program at Grant MacEwan Community College in Edmonton, Alberta is a two-year diploma program designed to prepare students to meet the growing demand for skilled audiovisual personnel in business, government, industry, and education.

The program, since its inception in 1971, has admitted an average of 30 students each year and has graduated an average of ten students each graduating year. In 1971 the program was staffed by a full-time program head and three part-time instructors. Today the program has a full-time program head, a full-time instructor, a full-time instructional assistant, and five part-time instructors. The primary reason for this expansion of staff, (when the number of students in the program has remained fairly static since 1971) is the heavy involvement

of the AV Technician Program in providing "service courses" e.g. photography, AV equipment operation, basic graphics production to other program areas in the college and also the offering of evening credit courses, principally photography.

In the early and even middle 70's the program was designed to meet a perceived need for AV production technicians in the schools of Alberta. By 1977 it became clear that the educational system had all but ceased to be a source of employment for our graduates. The emerging markets for AV production technicians is now very clearly industry, government and business with very few employment opportunities in educational systems. This change in the employment picture has had a great impact upon the program — affecting everything from the structure and content of the

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Colour
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Rent
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program to the composition of the program's advisory committee.

The program of studies in the Audiovisual Technician Program is organized into four fifteen-week trimesters offered over a period of two school years. The course work of the second and third trimesters is compressed into eleven weeks to allow for the offering of two four-week field placements and still enable the program of studies to be offered within the normal school year of September to April.

The program is designed to prepare its students as audiovisual generalists with competence in a variety of knowledge, attitude, and skill areas associated with audiovisual production. Relying heavily on the adage of "learning by doing" the program is structured to provide learning experiences for students in the following areas:

Production Planning — use of objectives, audience analysis

Production schedules — writing specifications, and scripting techniques

Photography — black and white photography, high contrast, color slides, single screen and multi-screen slide-tape productions, super 8mm film production

Graphics — preservation and display of materials, lettering skills, basic visualization skills, overhead transparency productions, television graphics, slide and filmstrip flats.

Audio Production — knowledge of audio equipment, sound theory and application of sound in communication, recording, editing, and mixing skills.

Television Production — emphasis on ENG and EFP production techniques including planning, scripting, shooting and editing skills, also some exposure to studio production.

Equipment Operation and Maintenance — skilled operation of projection, audio and video equipment, ability to adjust and effect minor repairs on equipment.

AV Management — determina-

tion of resources and requirements for the basic audiovisual services of selection, acquisition, distribution, utilization, maintenance, and production.

Personal Development — ability to get along with colleagues and clients, development of a positive attitude towards AV and work habits.

An important aspect of the Audiovisual Technician Program is the two four-week field placements mentioned earlier. The student is required to put in a normal working day for a four-week period in each of these placements. Each placement is equal to one three-credit course and the student is required to pay the regular course fee. There is no remuneration required from the agency for the student placed there; although, some agencies do elect to give honoraria to the students placed with them.

The first field placement occurs at the end of the student's first year. The intent is to place the student in a real-life audiovisual environment. For this placement, the aid of larger audiovisual departments is sought in order to provide as wide a range of audiovisual experiences as possible for the student. This allows the student to experience the day-to-day operation of audiovisual departments. It is a very sobering experience for many students.

The second field placement occurs in the last four weeks of the third trimester or in the middle of the second year. It is designed to be a "testing ground" for the student. The student is placed with any agency that can provide an opportunity for the student to take the responsibility for producing an audiovisual program. In theory this should involve the agency supplying the script, material and equipment; in practice, it often means the agency supplies the materials and the student has to work out the rest.

When the student has completed his second field placement, he should have the proper educational theory and practice to begin his professional career.

Dave Milner is an instructor at Grant MacEwan Community College, Alberta.

EXPLORATORY COURSE IN FILM ANIMATION

Phil Knox

For the past few years, the Instructional Media Office has been offering an introductory course in film animation to students at the Cycle One level (grades 7-9). It is a one-period option course and is given every other day on our two-day cycle program. The course is repeated each term so that three different groups are covered during one school year... thus the course extends over approximately thirty teaching periods of 45-50 minutes.

This film animation course is offered as a media course; however, it could be adapted to become a unit within any regular art program. It is designed to incorporate graphic design, sketch and free art media as well as the "cel" process whereby the animator may make use of movable foregrounds with constant background scenery.

The unit is divided into four segments. The first deals primarily with the process whereby our eyes perceive motion. Persistence of vision is explained through the production of thaumotopes — a small circular disc with two drawings, one on either side, which comprise a complete picture. When the disc is spun... the two

pictures come together through the process also known as retinal retention. This is designed to explain the manner in which all motion picture film is viewed.

Next, the students experience a sequence of motion or action which they design themselves. The "flip-book" contains as many as fifty pages or "frames" upon which the student draws the individual pictures which make up the sequence — each page being a little different from the one previous. When the pages are flipped the frame progression results in a motion sequence.

In the third segment of this unit the students must reduce the graphic area down to 16mm frame size by drawing directly onto the clear 16mm film. They attempt to produce a simple statement involving motion or action by drawing frame by frame over approximately 6 seconds worth of clear leader. The film is then spliced end-to-end and a film loop is the result. This loop is then projected on the 16mm projector and the sequence is viewed on a screen.

Finally, the student is encouraged to plan and produce a film "in camera" through the art of film animation.

Super 8mm cameras capable of shooting single frames, tripods, lights and a simple registration board are utilized in these productions. Students may produce "filmograph" material — which may involve a series of drawings (each one a little different than the one previous) on 8 x 11 paper. Or... they may work under the camera and produce a film using cutouts, plasticene, models, or any other medium which can be placed in one position and frozen while the frame is taken by the camera. The result is a short sequence of animation which can be edited and projected for all to see! There are other early attempts at producing motion and these "games" may be produced by the students for credit.

The above course in media serves as an introduction to film and film animation techniques, and teaches the student to communicate in a new language and to come to grips with the procedures and tools required in this medium.

Phil Knox is an art teacher at Lindsay Place High School, Pointe Claire, Quebec.



A SELF-INSTRUCTIONAL AV EQUIPMENT OPERATION LABORATORY

Robert A. M. Ascroft and Marilynne Malkin



One of the objectives in most introductory media courses for pre-service and in-service teachers is the acquisition of skills necessary to operate AV equipment commonly found in schools. The traditional approach to teaching equipment operation is the in-class demonstration and practice. Both instructors and students in the media course at McGill University had found this method to be unsatisfactory. The instructors felt that there was insufficient time, equipment and assistance to adequately teach these skills. Approximately 75% of media students are female under-graduates, most have rarely used any type of AV machinery and for them the equipment operations part of the course was approached with misgivings. Some students reported that there was not enough opportunity to really begin to feel comfortable with the equipment; others were distressed with having to practice in front of large groups of student peers. Clearly a different approach was needed. This article reports on the way in which a self-



instructional approach to learning equipment operation has been successfully developed and implemented in the Faculty of Education.

The Educational Media Centre provides a number of different services, amongst which it offers a variety of credit courses. The basic course, "Introduction To Educational Media," is a pre-requisite to all others. Although not required for a Bachelor's

Degree in Education, 70% of under-graduates elect to take this course at some point in their three-year program. The media course embraces three main instructional goals. The primary goal enables students to acquire the theories and principles essential in the design of effective instructional materials. A second goal provides students with techniques and skills to select, produce and evaluate

materials in a variety of formats; i.e., print, audio-visual, etc. The third goal requires that students achieve a basic competency in AV equipment operation.

Instruction in equipment operation had in the past created an imbalance. It demanded an inordinate amount of time, interfering with the teaching of other skills, procedures and theories which the instructors felt were more important. In searching for a way to balance these goals, the concept of the learning laboratory was first conceived. If the responsibility for acquiring competency in AV operation could be scheduled outside of the regular class period, there would be sufficient time to adequately cover the other goals. Additionally, the fact that all potential users could learn how to operate equipment without requiring assistance from instructors and technicians would enable the Centre to provide instruction without incurring added costs.

Before full-scale planning began, certain essential requirements had to be met: the program had to be inexpensive to operate and maintain; it could not require excessive demand on the Centre's technical staff and; most important, it had to be effective.

The Development of Self-instruction

The opportunity to implement the self-instructional program came when the Faculty of Education moved from the MacDonald Campus to a new location near the main campus in 1970. It had been previously decided that equipment and instructional materials should be housed in individual learning carrels in a self-contained room. Included in the plans for the Media Centre was a request for a carrel room and twelve individual carrels. Eight are currently used for equipment instruction and the remaining for production.

The equipment included in the eight carrels was selected on the basis of a survey of media used in local schools. Each piece is supported by accessories, appropriate software, and operating instructions. Most also contain a large diagram showing major components.

The equipment consists of: overhead projector • manual

filmstrip/slide projector • manual threaded 16mm film projector • autoloader 16mm/film projector • slide/cassette tape synchronizing unit • 35mm slide projector with filmstrip adapter • reel to reel tape recorder and record player • Super 8mm projector

In nine years of operation, the equipment has not substantially changed, however, a number of different instructional approaches have been developed, tested and discarded. A series of audio tapes based on Postlethwait's Audio-Tutorial System was found to be too wordy. A set of photographs illustrating steps in serial order became too cumbersome

to use in the carrel areas when ten steps were exceeded. Super 8 cartridge films, produced to demonstrate appropriate procedures, rapidly deteriorated, and constant replacement defied the condition of cost effectiveness. A set of prose instructions supplemented by line drawings, was finally settled upon. The present form developed as a result of systematic formative evaluation. Each set of instructions was first tested on individual students, revised, re-tested on groups of students and revised again.

Operating Procedures

Before the equipment lab was established, students met with instructors for three hours a week. To

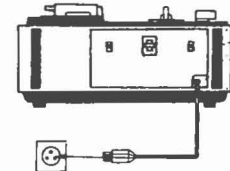
CARREL 6 EQUIPMENT OPERATION SELF-INSTRUCTIONAL PROGRAM

SONY TC-106 REEL TO-REEL TAPE RECORDER

1:00 SETTING UP

- 1:10 Remove the cover
- 1:20 Open the accessory pocket by pressing the two knobs located at the right side of the cabinet and then take out the stored AC Power Cord.
- 1:30 Connect Power Cord.
- 1:40 Turn VOL./POWER Control Knob clockwise to turn the record on.

A white lamp in the REC LEVEL Meter is illuminated when the recorder is on.



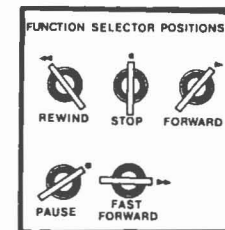
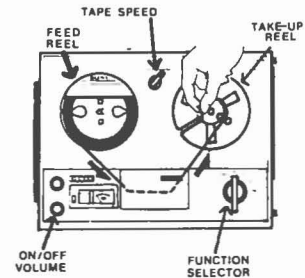
2:00 PLAYBACK

- 2:10 Place the supplied demonstration speech or music tape on the FEED REEL Spindle and an empty reel on the TAKE-UP REEL Spindle and thread the tape as illustrated.
- 2:20 Set the TAPE SPEED SELECTOR to the matching tape speed of the supplied demonstration tape 3 3/4 ips. (inches per second).

NOTE: When changing tape speed, be sure the FUNCTION SELECTOR LEVER is set in stop position.

- 2:30 Set the FUNCTION SELECTOR LEVER to forward position to advance the tape.
- 2:40 Adjust the VOL./POWER knob and the TONE knob to the desired level.
- 2:50 To stop the tape, set the FUNCTION SELECTOR LEVER to stop position.

NOTE: To advance the tape quickly to a desired position, set the FUNCTION SELECTOR LEVER to fast forward position after the tape comes to a complete stop in pause position.



REMOVE THE DEMONSTRATION TAPE.

Turn FUNCTION SELECTOR to rewind and then to stop when rewound.

achieve the goal of self-instruction, the media course had to be restructured. Two-hour sessions were established and students were instructed to use the third hour to practice operating the equipment in the lab during the first six to seven weeks of the term. The students may come in at any time during the 13 hours a day the Centre is open. The average practice time necessary to obtain a satisfactory level of competence is usually about two hours per machine.

During the first class session students are introduced to the carrel room and given the specific objectives of equipment operation in a checklist form. While checklists have been an integral component of the system since its inception, the initial format was extremely detailed making it somewhat difficult to read. In 1978 a summary checklist containing the essential points in a visually cleaner format was developed. A small study was conducted to determine the instructional effectiveness of both checklist forms versus no checklist at all. Course sections were randomly assigned to one of three treatments: 1) detailed checklists, 2) summary checklist, and 3) no checklist. Using Chi square analysis, no differences were detected between the two checklist forms. However, a statistically significant difference (p. 05) was found when the checklist groups were compared to the no-checklist groups. This was interpreted as confirmation that the checklist is a necessary component. Furthermore, since either checklist format produced the same learning results, a decision was made to use the shorter version which appears less awesome and coincidentally uses a smaller quantity of paper.

During the middle of the semester, students must independently schedule an appointment to take a 20-minute equipment operation performance test administered by the Centre's Senior Technician, Jim Hurley. Jim randomly selects two pieces of equipment and one 16mm projector and uses the student's checklist to verify their performance. Students are required to operate the equipment in the steps outlined in the checklists, within specified times and without errors (some minor variances in operating

techniques are usually tolerated). Successful students are graded PASS, the unsuccessful undergo a cycle of practice and re-testing until they achieve the acceptable standards. 80% of the students achieve the criterion on the first attempt, about 17% need more practice and a second test, 2% pass after the third test and about 1% drop the course at this point.

SLIDE PROJECTOR	96%
16mm AUTOLOAD	93%
FILMSTRIP	92%
16mm MANUAL	80%
TAPE RECORDER	69%

Recent Developments

The learning results cited above are now being consistently achieved, supporting the 90/90 performance standards initially set for the lab. However, a recent questionnaire concerning the students' attitudes to the lab and self-instruction, suggested that all were not completely satisfied with the clarity of the instructional materials. An alternative approach using an algorithm as a means of providing clearer instructions for the manual threading 16mm projector was implemented in the fall of 1978. Figure 1

shows the algorithm for operating the Kodak Pageant Projector. In a survey following the term, 87% of the students felt that this approach was clear. Unfamiliarity with algorithms was cited as the main problem among students who found the instructions confusing. To overcome this difficulty two changes are being considered. The first is to provide a brief introduction to reading an algorithm in the checklist handout. A second improvement concerns the design of the algorithm itself. It seems that many students have tried to read the steps across the chart in a normal reading manner rather than from top to bottom as the steps are laid out. For this reason the directional lines will be colour-coded. It is likely that in time the algorithm will become the standard for the system, a process that will transpire when the authors have some time.

Self-Instruction In Software Production

Three years ago plans to expand self-instruction into the area of software production were begun. It was felt that a logical start was with the preparation of copy slides as a tape slide presentation is a major student project in the basic media course, and in many other faculty courses. Once again the classroom demonstration

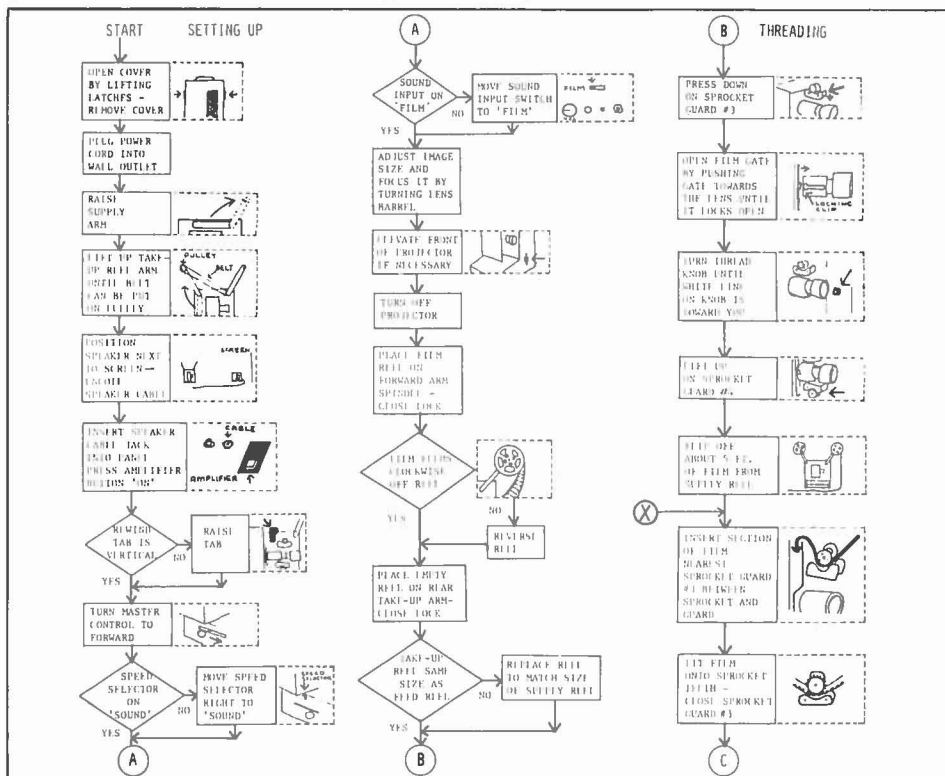


Figure 1. Algorithm for Kodak Pageant Projector

method of instruction had proved to be inefficient. It took too much time, students' projects were not achieving sufficiently high standards, staff technicians were barraged with questions and the cameras were breaking down with alarming regularity. When the last problem prompted the purchase of two new copy cameras (Olympus OM-1's), this second phase of self-instruction began.

A somewhat different approach was necessary for this self-instructional program. After a careful analysis of the skills and knowledge which are needed to produce effective copy slides, a decision was made to use video-tape rather than written material to carry the instructional message. In addition to its desirable attributes of colour, sound and motion, free access to McGill's television studio made the selection of the video medium economically feasible.

An initial pilot version was made to test two approaches to sequencing instruction. A written test was given to measure cognitive achievement, and the specific technical aspects of students' presentations were scored and compared to results of previous years. In addition, as part of the formative testing, students were interviewed to ascertain what difficulties they had encountered. Revisions were made and a $\frac{3}{4}$ inch colour cassette was produced.

The procedure for learning how to operate the copy camera involves watching the video tape and arranging for a practice session before doing the actual slide work. Unlike equipment operation procedures, students must reserve time for both practice and work sessions. A large laminated board covering a two-week period and divided into one-hour time slots is located in the lab, students have only to write their names in a time block and show up at the reserved hour.

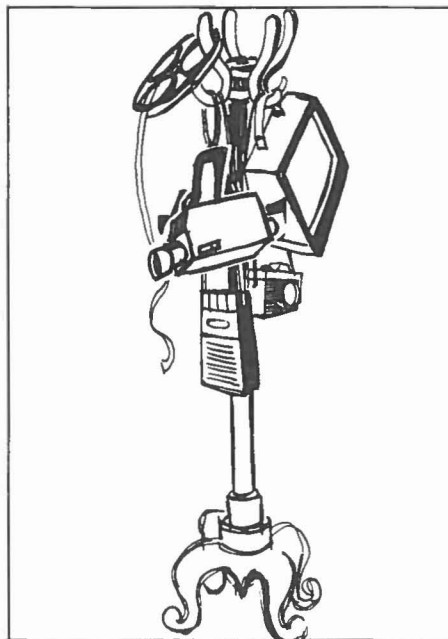
Although the colour video has only been in operation for one year, the program appears to be very effective. Evaluation is based on clear improvements in student productions and substantially fewer demands on technicians' time. Interviews with students, however, have suggested further ways of improving the efficiency of this self-instructional unit. As

the copy procedure is fairly complex, some students have indicated that on-the-spot back-up materials would be useful when they actually begin working on their slides. In keeping with their expressed needs, a large algorithm integrating diagrams and photographs has been placed behind the copy stand. Using a system of colour coding, students are led through a series of decisions concerning their copy material. The usefulness of these supportive instructions will be assessed in the coming year.

The problems and concerns which initiated both this first production unit and the equipment operation programs are well on their way to being resolved. All those involved are clearly satisfied. Few students criticize the self-instructional system; most, in fact, openly appreciate the sense of responsibility implied by this structure. The media instructors are pleased that these basic skills are handled so effectively outside class sessions. Furthermore, the success of the latest developments has confirmed the department's intentions to implement self-instructional programs for all procedures which can be successfully taught without "live" instructors.

Robert A. M. Ascroft is an assistant professor at McGill University.

Marilynne Malkin is a lecturer at McGill University. They are both associated with the Educational Media Centre.



CREATING MEDIA AWARENESS

G. A. LeBlanc

Communications is a field where changes are occurring at a phenomenal rate. Seven or eight years ago three-quarter-inch cassette and half-inch cartridge were the newer formats on the video market. Since then, we have seen the Betamax VHS formats come into being, the video disc being marketed commercially and now with the newest entries in the field of communication, the Teledon Communication System, fibre optics and computers are being spoken of as the format of the future. Future use of satellites and computers and the Teledon predict more sophisticated and awe inspiring changes in the collection, analysis, dissemination and access to information. Our role as media specialists and educators is not, I hope, to simply manage and distribute this information, rather we should be able to educate and innovate in using these newer, refined tools. Specifically, we have to teach teachers to make their work much more effective in today's society. Beyond the teachers there is a much broader audience which we should be addressing.

The benefits of creating broad media awareness and its potential are numerous. The benefits occur when we seek funding for programming or for media departments. Greater media awareness creates greater acceptance of the media and helps in future planning for developmental purposes. Eventually, broad media awareness will lead to increased utilization and effectiveness of media; it will also lead to changes in teaching methodology. Broad awareness should create a greater willingness to explore and adapt new formats for both consumption and production. In short it should make the media specialist's role a much more rewarding one, increased awareness causes a greater respect and appreciation for the whole field.

Reference Point Potential

Creating media awareness is

closely aligned to a pet theory from which I try to operate. It's called **R.P.P.** or "Reference Point Potential". R.P.P., if you wish, is like a hook on a coat rack. When you enter a strange room or unfamiliar surroundings you look for a coat rack or table to use as a reference point from which you can work. You hang your hat or your coat on that hook or you place your briefcase on the table in a certain place. Positioning yourself or an object becomes your reference point for the activity in that environment, and becomes a coat hook from which you enter and leave that particular environment. It then becomes a security point within your living space to which you can retreat to and depart from if necessary. In dealing with media awareness, I have found that people new to the field are usually enthusiastic about exploring media but become quite rapidly anxious and withdraw if they cannot find a suitable coat hook from which to enter the environment. Therefore, from the reference point we can lead people into new awareness and knowledge about the whole field of media and communications.

In addition to using a simple reference point in dealing with media awareness, I like to include the most important aspect of the reference point: its potential, the second P in R.P.P. The potential of any given object, situation, or reference point in general is phenomenal. We must identify and recognize the potential of all media as it relates to creating media awareness. The best way of determining the potential of any given reference point is to place yourself in the role of the consumer. Assume that there is a new series of videotapes which you wish to add to your resource center. Ask yourself the following questions:

Who can benefit from this series?
Who is the audience?

What is the cost effectiveness?
What is the budget?

Where can it best be used? What is the philosophy?

When can I realistically hope to implement it? What is the time span?

Finally, how can most people hang their coats on it? — R.P.P.

As a media specialist consult your reference point potentials. You will find that you can be much more effective in creating media awareness in general and, more specifically, you will find that your valuable time is better budgeted.

Target Audiences

As an educator, I perceive two broad groups as target audiences for the media specialist; people within the institution and people outside the institution.

Internal Consumption

Your first target audience is the people who work for your institution. I shall use a school system as my example, but I am sure that you can use any institution and arrive at the same conclusion. As the media specialist for a school system, your target audiences cut across a very broad spectrum: students, teachers and specialists, principals and department heads, administrative officials and finally the board of trustees. Each of these groups needs your services and each should be given a set of reference points from which they can approach you and your services without any feelings of anxiety.

Students

Use the already existing media awareness of the student. It is phenomenal. Put this awareness into perspective so that the students can understand the whole media field. Then set up media clubs in schools. If possible, use student help at your Resource Centre. Do joint teacher-student productions such as slide-tape productions, video productions, etc. Let the students know who you are, what you do in the school system.

Teachers

Set up and conduct specific workshops which are practical and concrete for teachers at various grade levels or subject levels. For example, you can have all the grade 3 teachers discussing a particular format, topic or subject area. Or you can have the history teachers. Do not try to change the teaching methodology too rapidly, instead provide numerous reference points to introduce them to media. Get involved with teachers in activities which are not necessarily media related. Let them know who you are.

Join teacher federation groups; if possible, join service clubs that teachers may be strongly identified with, or outside sporting or cultural activities.

Principals.

They become the key pivotal point of the success or failure of your department or your system of media awareness in the whole institution. Let them know what you are doing and what you would like to do with their help. Involve them in the decision-making process. The more input you have from them the easier it will be when the implementation time comes. Ask the principals to conduct media awareness meetings once or twice a year. Let them do the implementation planning, on a new service or new format which you wish to introduce to the school system. Show the teachers and students that you work together with the principal.

Administrative officials.

People such as the director of education, your superintendents, your controller of plants, your controller of finance, etc. sometimes become the pivotal point between you and the principal. Remember that they control the recommendations on your budget, your staffing and your space. Therefore, good relations with them and broad media awareness with them are very important. Inform the officials, if possible, of any long-range plans that you may have. No surprises, please. Let them know what you are doing. If you have a special project which is to be implemented into the school, invite the superintendent or the director, etc. to observe the procedures. Inform them about the aims and the objectives of your programs. Do a little extra, if possible, in dealing with your officials. Volunteer to sit on committees which may be related to your field of work, curriculum committees, special institutional committees, committees which may be related to library boards, etc. which have some related function to your institution. In other words, make yourself known to the officials. Offer assistance by supplying equipment such as overheads or a P.A. system or what-have-you for a special board meeting. You are the one who should have the knowledge and the resources or the sources of resources to help these people out.

Volunteering or offering to be helpful to these people is a much better approach than requesting increased staff, increased budget and increased space when they don't really understand your role or your potential. Once you have raised administrators' media consciousness through your services, requesting increased support should be easier.

Trustees.

The last internal target group that you must deal with are the elected or appointed trustees who formulate the policy and make the final decisions. Get to know them. Invite them to a special tour of your facilities. Or better still ask them to hold one of their regular board meetings in your Resource Centre. Present yourself in front of them from time-to-time to inform them of any major changes in your aims and objectives or significant growth of your services. From time to time provide them with a concise up-to-date report of the successes and failures that your service has had in supporting the function and role of your particular institution. If at all possible, try to deal with this group on a one-to-one basis because a few key trustees will often hold the balance of power in swaying the decision-making process of a particular school board.

Basically when dealing with internal target audiences let them know who you are and what you have to offer. Emphasize what their role is in relation to your services, what benefits can accrue to them if they use your services. Most importantly in dealing with your internal target audience, make absolutely sure that your reference points for them are very clearly labeled and easily approached.

External Consumption

Your second large target audience are people who are external to the institution who might have a general interest in the field of media and communications. First, there is the public at large, the taxpayer. You can hold an open house to show what your services have to offer to the school system. You can have special displays in malls or in store fronts during special times like Education Week, etc. Use your community cable television channel, if at all possible. Speak at P.T.A.'s and other parent gatherings.

People who have special interests often have special communication needs. Members of conservation authorities, historical societies, geographic societies, science groups, musical guilds, sports groups, etc. will benefit from increased media awareness.

Thirdly, other institutions such as hospitals, colleges, other school boards, government departments, mental health group, The Children's Aid Society, Society for Crippled Children, are always looking for new ideas and new resources, new ways to communicate their message to the public and to their clients. In your role as a general educator, I'm sure there is much that you can offer them.

A fourth group that you may want to consider is industry and commerce. This group is involved in education in the everyday working world. If they see what's going on in the classroom, they will have a greater appreciation of their own target audience.

In conclusion recognize and adapt to today's technology as much as possible. Introduce this technology and its potentials to the education community — the students as well as the teachers. Lastly, make the technology work for you.

G. A. LeBlanc is the co-ordinator of the Media Resource Centre of the Separate School Board in Sault Ste. Marie, Ontario. The Media Resource Centre serves 6,900 students with over a thousand videocassettes, several thousand filmstrips, 35mm slides, multi-media kits, records, audiotapes and prints.

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GUIDELINES FOR AUTHORS

Media Message accepts papers dealing with the field of educational technology and learning: computer assisted instruction, learning resources centres, communication, evaluation, instructional design, simulation, gaming, and other aspects of the use of technology in the learning process.

Manuscripts should be typed on 8¹/₂ × 11 paper. All material must be double spaced. Include a title page stating title, full names of authors, identification of each author (position and institutional or other affiliation), and mailing addresses including postal codes for each author. References should be prepared according to the style suggested in the *Publications Manual of the American Psychological Association*.

Two typed copies of each paper should be submitted. Visual and graphic material is welcomed, however, it must be of good technical quality.

The *Newsletter* features a column called "Viewpoint" which focusses on a person or an issue. Items announcing conferences or other activities and publications of interest to members are welcome.

Manuscripts will be acknowledged as they are received and reviewed for publication.

Submission

Mail manuscripts to:

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Atlantic Institute of Education
5244 South Street
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Deadlines

<i>Media Message</i>	<i>Newsletter</i>
January 15	December 1
April 15	March 1
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MAKING YOUR OWN OVERHEAD TRANSPARENCIES: A WORKSHOP DESIGN

Mei-fei Elrick and Don McIntosh and Ab Moore

Overhead transparencies are effective teaching/learning aids and are widely used in university classrooms. A workshop, "Making Your Own Transparencies," has been developed at the University of Guelph to provide an opportunity for faculty, staff and graduate students to learn how to make overheads. The rationale, format, implementation and evaluation of the workshop are discussed.

Rationale for Workshop

The use of overhead projectors and transparencies has become widespread at the University of Guelph. In order to give faculty, graduate students and staff an opportunity to improve the design and use of overhead transparencies, a workshop entitled, "Making Your Own Overhead Transparencies," has been developed by the Office for Educational Practice and is offered several times a year. It has now been given for a number of years and as a result of feedback from participants and changes in our own thinking, it has evolved to its present form. The emphasis is now on self-made (hand drawn) overheads rather than on ones professionally produced. This type of transparency is very effective and gives the instructor complete control of its preparation and presentation. We also point out that making your own overheads can save time and money.

The objectives of the workshop are:

Given the necessary materials, each participant will be able to design and produce simple, handmade overhead transparencies which will meet the standards for legibility in a large classroom. Each participant will be able to demonstrate several techniques for manipulating overhead transparencies such as the use of overlays, progressive disclosure, etc.

Each participant will be able to operate an overhead projector.

Workshop Plan

When designing workshops, we utilize the working principles of learn-



ing found in Davis et al. (1974). They say that learning is more likely to occur if:

experiences are varied and novel.

material is meaningful to learner.

learners are presented with a model performance during which important aspects are labelled

practice and feedback are available on material to be learned.

To incorporate these principles the workshop is planned as a varied experience in which participants see models of overheads, are able to practise making overheads and make a presentation using the overheads they have made. The workshop lasts three hours. During a 20-minute introductory presentation models of transparencies are shown and the rationale for the use of overheads and princi-

ples of designing and using them are discussed.

We quote Bligh et al. (1975) who say, "The traditional chalkboard has few advantages compared with the overhead projector. Seymour has shown as long ago as 1937 that students can perceive dark letters on a white background more easily than white letters on a black background ... Overhead projectors may provide a larger image, greater visual contrast and a wider range of colour. Large areas of board are not required. Use of the overlay facility permits easy analysis and re-assembly of complex diagrams at will; it is less dirty; and teachers who are poor artists may trace or prepare their diagrams in advance." We add that it allows the instructor to face the class, provides a stimulus variation and reinforces the spoken word.

After the initial 20-minute presentation the participants are broken up into small groups of three or four, given a one-page article and asked to design an overhead which would facilitate learning the material in it. After discussion of the overheads presented by each of the groups, there is a 15-minute demonstration of techniques for using overheads and operating the projector.

At the end of the first hour coffee and juice are provided and participants are divided into groups of no more than eight and allocated to different rooms. During the next 45 minutes each participant prepares several transparencies to illustrate a three to five minute presentation. Materials such as pens, transparencies, frames, tape, stapler, etc. are provided. Each participant then gives his or her presentation and receives comments and suggestions from the group on the overheads and the way they were used. Other aspects of the presentation are not commented upon.

Evaluation

During the last 15 minutes participants are asked to tell us what they found useful and what could be improved in the workshop. They have been enthusiastic about the chance to make their own overheads and receive feedback on them.

Conclusion

In the workshop participants synthesize material presented in the demonstration and the readings as they prepare their own overheads. They are then asked to evaluate the effectiveness of those overheads. According to Bloom et al. (1956) synthesis and evaluation are at the upper levels of the cognitive processes in their taxonomy.

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Dr. G. A. B. Moore is Director and Mei-fei Elrick and Don McIntosh are Instructional Development Associates in the Office for Educational Practice, University of Guelph.

This office is concerned with the development of teaching skills which will enhance student learning. Workshops such as the one described are examples of the Office's activities.

AMTEC '80

Check your 1980 calendar and circle the dates, June 15 to 18. Make plans to be in Edmonton at the Hotel MacDonald for the AMTEC '80 conference, emphasizing the theme, "Entering the Eighties".

The Edmonton Audio Visual Association is planning to repeat its success of ten years ago when it hosted the first national conference of the organization, then called ETRAC (Educational Television and Radio Association of Canada).

Incidentally, 1980 is also a year of celebration in Alberta, marking its 75th anniversary as a province. While looking ahead we will still pay tribute to the past, with a special dinner at Fort Edmonton, to be sponsored by the Alberta Government, with Hon. David King, Minister of Education, as official host.

Mr. King will also speak at the opening session on Monday. Hosts at the Monday evening reception will be Bell and Howell.

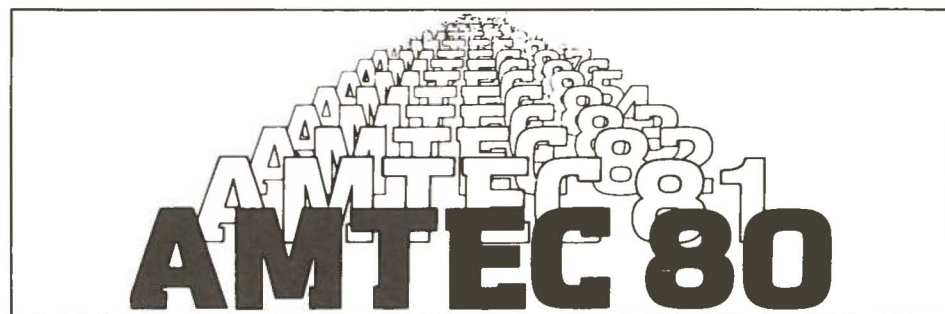
The Program Committee, chaired by Dr. Ken Bowers of the Faculty of Education, University of Alberta, is hard at work searching for notable speakers and planning comprehensive theme sessions which will deal in many cases with the impact of technology and science on education and training in the future.

Major themes will focus on satellites and cable distribution, educational film and television production, graphic and photographic production, broadcast concerns and programming, instructional design, development and evaluation, computer technology (with sessions on micro-computers and videodiscs), administration and management, libraries, archives and information retrieval, communications theory, distance education, simulation and gaming, maintenance and engineering.

Among the speakers who will explore the impact of new technology on the media will be Dr. S. N. Postlethwait of Purdue University. He is the author of "The Audio-tutorial Approach to Learning Through Independent Study and Integrated Experiences" and a more recent work on "Biological Science Curriculum Study, a mini-course development project".

Delegates from Britain and Japan have agreed to come to discuss their programs, their technology and plans for the future.

For further information about the conference, write to **Hans Kratz, conference chairman, Alberta Educational Communications Authority, The Devonian Building, 11160 Jasper Avenue, Edmonton, Alberta, T5K 0L2.**



OPEN UNIVERSITY: MULTI-MEDIA APPROACH TO MATHEMATICS

Lynne Graham

This article concerns the ideas behind the teaching strategy of M101 Foundation Course in Mathematics and its integrated multi-media approach. To place this in its right context it begins by outlining the structure of the Open University.

The Open University is a distance teaching institution, reaching about 60,000 undergraduate students in any year throughout Great Britain. In addition, up to another 30,000 students are following courses outside the degree programme.

In order to obtain a B.A. general degree students must gain a total of 6 credits; an honours degree requires a total of 8 credits. Courses are offered at four levels: — first (or foundation) then second, third and fourth — and by six faculties — Arts, Social Science, Education, Mathematics, Science and Technology. The Open University “year” runs from February to November.

Communications *in* to the student are by:

Post: All correspondence texts, cassette tapes and administration matters are sent through the post.

BBC Network: Television and radio reach the student directly at the turn of a switch. TV and radio programmes are broadcast weekly over the national BBC network.

Students' means of communication *out* of the home are by:

Post: Assignments are marked by correspondence tutors or by computer.

Travel: Foundation Courses (but not higher level courses) involve a fortnightly tutorial at a local study centre (about 30 miles maximum from the student's home). There are also computer terminals at

students. Many students set up self-help groups.

Having outlined some of the features of the Open University I can now place M101 in context. M101 is the Mathematics Foundation Course. It is a full-credit course with about 3,000 students taking the course each year. It was first presented in 1978. This course has adopted an *integrated* multi-media approach to the teaching of mathematics. In order to discuss this approach I need first of all to talk a little about the structure of the course since this is essential to the ways in which we use different media.

The course is divided into six blocks as illustrated in Figure 1. In addition there is a floating Unit which students can study at any time; this gives them a chance to reflect upon the process of problem solving. The blocks are presented in the order I, II, III, IV, V, VI.

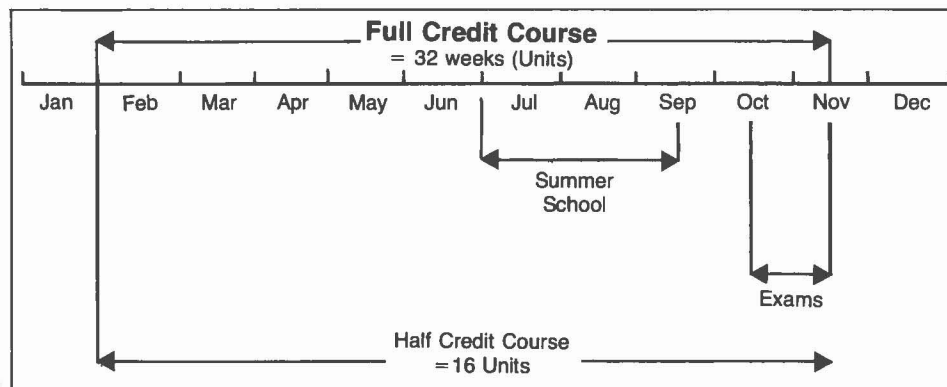
A block contains five weeks work. The first four weeks are teaching Units. The fifth Unit (week) in each block acts as a review and allows time for students to complete assignments.

We decided on this block structure for the following reasons:

A block is a manageable unit of instruction for both authors and students. A block pursues a set of consistent themes and has short term objectives which can be achieved in a realistic time; as opposed to course objectives which are spread over a year and are difficult to perceive.

More important, blocks *pace* students through the course. Assignments worked through the year count for 50% of the overall assessment. The important thing is that there is a sharp cut-off-date for each end of block assignment. Students must have finished the assignment before that date and so are forced onto the next block — a fresh start.

The structure of the course can be broken down even further to that of the Units. A Unit comprises about 10-12



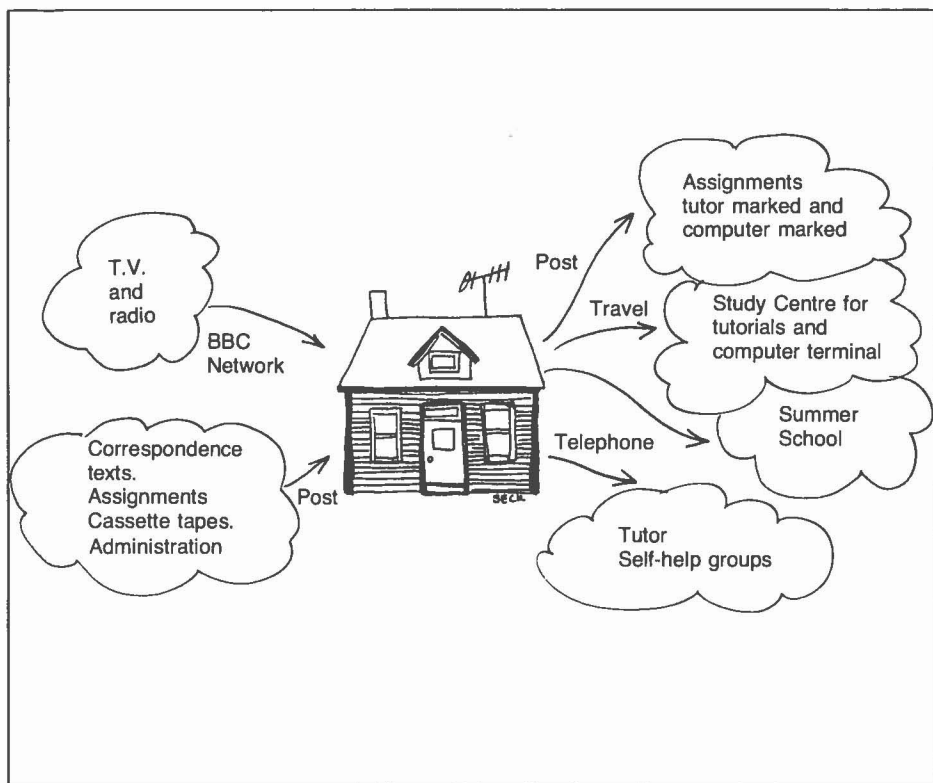
A full credit course involves 32 weeks work of about 12-15 hours a week; exams take place in October/November. If a course involves a residential week, known as Summer School, that takes place in July/August using conventional Universities during the summer vacation. A half credit course involves 16 weeks work or 16 Units as they are called. The work is spread over the year — about one Unit a fortnight.

Open University students are based at home. Most study completely in their spare time.

local study centres for student's use.

Some courses include a residential Summer School lasting one week where students receive face to face lectures, tutorials and seminars. Summer Schools also provide opportunities for students to meet *each other* and discuss their difficulties.

Telephone: Students can contact their tutors by telephone. They can also get in touch with other



chance to practise recently acquired skills and techniques. It also enables them to consolidate what they've learned.

But the important thing is to keep students going. In M101 we try to ensure that students are always active. It is difficult to follow the text without having a pencil and paper at hand — and a calculator. A lot of the teaching is done through integrated problems and examples where ideas are gradually unfolded.

It also helps to have clear objectives. Students at a distance often become bogged down trying to understand every sentence — no matter what is intended. In M101 the objectives are stated at the end of each unit. Also, carefully constructed assignments and additional exercises define just what students do need to achieve after working through each unit. Texts are presented in large format form-A4-with plenty of diagrams and illustrations. There are wide margins so that students can make their own comments if they wish.

hours work, each with its own pace and its own objectives. In M101 a Unit is generally divided into five sections, each corresponding to 1½-2 hours — an evening's work. It is at this level that the integrated use of media is most important. We believe that varying pace and style of presentation is essential to retaining students' interest and helping them to keep up to date with the course. One section might be based on written text, the next might be centred on a television programme, and another on audio tape. Text, TV and audio tapes are the major methods of presentation and are bound into each unit and I would like to concentrate on these, although there are other additional components. Whatever method of presentation is used though the emphasis is always on active learning. Students cannot just follow passively, they are always actively involved.

Written Text

As might be expected, written text constitutes the largest proportion of course material — about 70%. It is after all a most useful medium and it is cheap. But in M101 we aim at an approach which uses text *most effectively*. Text is the natural medium for exposition. It gives students the

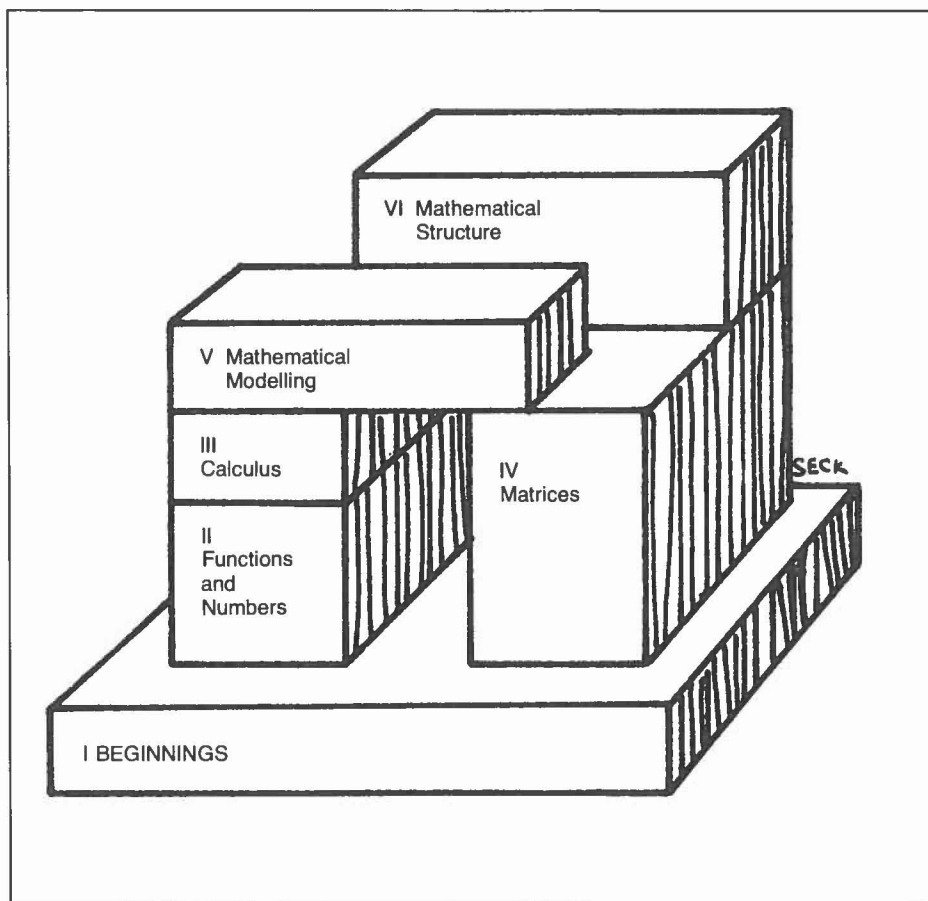


Figure 1

Television

Television is possibly the most publicised aspect of Open University Courses. That's probably because it is immediate and direct to the home. But again, in M101 we concentrate upon the *effective use* of television. It can be used to help students visualize ideas which would be difficult to illustrate on paper. It can demonstrate techniques and concepts using models. Most important, it can take isolated students out of the home and into the outside world.

But because television is immediate content is often quickly forgotten. Students are left with just an image. In M101 a 25-minute TV program forms the basis of a section. The section involves some pre-work and some post work. It is difficult to watch the program without working through the appropriate Unit section. TV programs are transmitted at fixed times each week. In M101 there is one TV program for each Unit. We believe that television, in addition to assessment, plays an important part in pacing students through the course just because it *is* integrated with the rest of the material.

Audio tapes are self-pacing. They can be worked through at the student's individual speed. The biggest plus perhaps is that they can be stopped, started and replayed as much as is necessary for any student.

They are more personal and informal than written text. It is as though the speaker were with the student. Because of all this, tapes demand more action from a student. The speaker can ask him to do something more effectively than print.

But this cannot be achieved just by voice. In M101 we use voice and frames. The speaker drives the student through; the frames give him something to focus on. The layout guides the eye, emphasizing the important points. It is difficult to illustrate the major points of tape in an article like this. It really requires a tape! The best illustration I can offer perhaps is to have someone read out the above section while the reader looks at Figure 2.

Incidentally, the frames are handwritten throughout the course. Again, we

the course. We believe that concentration on the structure of the course and the use of that structure to integrate varied media has resulted in a highly successful course as has been indicated by the feedback received over 1978.

M101 was produced by a course team involving academics, publishing staff, graphic designers and BBC producers. Written material was produced by academic staff within the Mathematics Faculty. Diagrams and design were the work of the Open University Media Studio. BBC producers, themselves academics, joined with other academics in the Course Team to produce the TV programs and audio tapes.

The course is the result of about three years work and preparation. It will be presented for at least eight years — reaching about 25,000 students.

Although M101 is a course aimed at isolated home based students, it could be argued that much of the teaching strategy — the very tight structure and the associated varied styles of approach are equally applicable to conventional teaching situations. After all, many students are just as isolated in the classroom!

The following articles are available on request from: Lynne Graham, Mathematics Faculty, The Open University, Milton Keynes, MK7 6AA, England.

M101: Means and Methods — a tape illustrating the teaching strategy of M101 and the use of audio tapes.

M101 Course Outline — a comprehensive guide to M101.

Audio Cassettes: Evolution and Revolution.

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Lynne Graham is a member of the Faculty of Mathematics at the Open University in England.

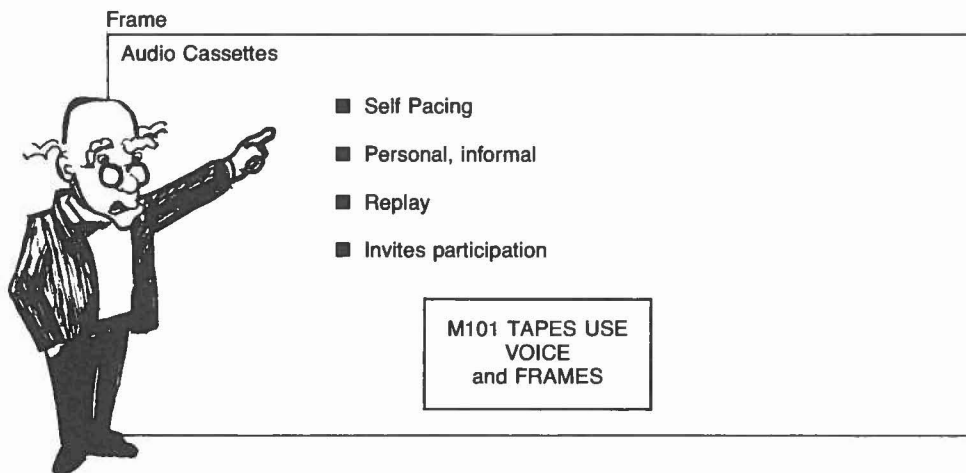


Figure 2. Student satisfaction with clarity of operating instructions

Audio Tapes

The major attraction of television is its immediacy but in some ways that can also be a disadvantage — concepts presented visually are often soon forgotten. Audio tapes are a new approach to teaching mathematics. They have many of the advantages of television but can be even more effective and have proved very popular with our students. Like television they form the basis of a section.

believe it makes the tapes more informal.

Audio tapes too are exceptionally versatile. They can be used to introduce an idea or to brush over difficulties. But they can also talk students through difficult techniques — providing the lines between the lines as it were.

These three methods of presentation are used consistently throughout

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