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Sharing educational media materials : a survey of media administrators at medical schools in New York State

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SHARING EDUCATIONAL MEDIA MATERIALS: A SURVEY OF MEDIA ADMINISTRATORS AT MEDICAL SCHOOLS IN NEW YORK STATE

A Thesis Presented to the Faculty
of the School of Communications
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In Partial Fulfillment of the
Requirements for the Degree
Master of Science

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CERTIFICATE OF APPROVAL

MASTER OF SCIENCE THESIS

This is to certify that the Thesis of

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submitted in partial fulfillment of the requirements for the degree of Master of Science in the School of Communications at Ithaca College has been approved.

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ABSTRACT

The purpose of this study was to determine whether a sharing system for instructional media software materials was desirable for the ten medical schools in New York State.

Questionnaires were sent to media administrators at New York State's medical schools to elicit responses regarding usage patterns of instructional media software in eight categories: posters, still photos, models, motion film, videotape, audiotape, 35mm slides and transparencies. Questions pertaining to types and amounts of media software used and whether the mediated programs were produced in-house or commercially produced were included on the survey instrument.

From the responses of the ten media administrators at medical schools in New York State, the following results were found:

1. Usage patterns of media software materials differ widely among medical schools in New York State.
2. Overall faculty use of instructional media is high in medical schools in New York State.
3. The majority of media administrators in New York State's medical schools indicated that it would be a valuable opportunity to borrow or exchange media software materials with other medical schools in New York State.

As a result of this investigation, one major need for further study was recognized: a study of medical school faculty in New York State to determine preference and usage levels of instructional media by these faculty, and attitudes regarding the potential of a media software sharing program between medical schools in New York State.

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INTRODUCTION AND STATEMENT OF THE PROBLEM

Statement of the Problem.

In the health sciences, as in all technological fields of study, the "information explosion" is clearly evidenced. Hundreds of professional and specialized journals, papers, pamphlets, and other literature are currently published. Filled with innovations, discoveries, theories, history and case studies, this literature serves the health science community in vital ways because most of the information presented is not available anywhere else.

Instructional media sources other than print are also serving the needs for specialized information in the health sciences in special ways. Commercial businesses such as Audio Digest, a subscription service for medically oriented audio cassettes, and Videosurgery, a videotape service providing tapes of various surgical procedures, offer the medical community well-produced programs using mediated formats to enhance the presentation of information. In medical educational institutions, media centers are producing programs using many types of media software for use in the classroom, lecture hall, laboratory, library and other places. Because of the unique potential of instructional

media (detailed in Chapter II), its effective use is sought by media administrators.

It is contended that one way to facilitate the most effective use of instructional media at medical schools would be to establish a systematic program for sharing media software materials between such schools. Currently, among medical schools in New York State, both private institutions and campuses of the State University system, there exists no comprehensive, universal system for this purpose. This problem was brought to the author's attention through an interview with Anne Lawrence,[1] Media Librarian at the State University of New York Upstate Medical Center in Syracuse. Ms. Lawrence expressed her professional opinion that access to media materials owned by other medical schools would be valuable to the faculty and students with whom she works. Ms. Lawrence cited isolated incidents of media materials being shared among health science schools in the Syracuse area. One such case involved the lending of a program dealing with physiology to the LeMoyne College Library, and another, the lending of a Biological Ethics program to a St. Lawrence University professor. Both programs were borrowed from Syracuse University's Upstate Medical Center. These cases were not the results of official

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[1]In May of 1977, while searching for a thesis topic, the author visited the Upstate Medical Center in Syracuse and spoke with Media Librarian Anne Lawrence.

policy, and certainly were not commonplace.

The implementation of a statewide consortium for the purpose of sharing instructional media software materials holds significant potential for medical students and educators.

In its simplest form, a system for sharing media materials owned by medical schools would open a line of communication which would provide an effective way for medical media administrators to be continually aware of each others' acquisitions and productions. This would include the knowledge of what programs are being produced at each medical school's media center, as well as what programs are being purchased from commercial media dealers. With this knowledge, duplication of efforts in terms of media productions and purchases could be eliminated through the sharing of materials. The sharing of media programs to facilitate common instructional objectives among medical schools could therefore result in a three-way savings of time, money and personnel resources. The finite potential of such a system is impossible to determine before its inception, but seems limited only by the enthusiasm and creativity of those media administrators at medical schools across New York State.

Hypothesis

A systematic method for the sharing of instructional materials between medical schools in New York State is seen as educationally beneficial by media administrators at those schools.

Significance of the Problem

The primary focus of the study involves sharing media software in a systematic fashion among medical schools in New York State. The significance of a project of this scope lies in its role as a model for more comprehensive media software sharing programs among all levels of educational institutions around the state and larger areas. As the findings are interpreted, they can be applied to any level or program in education.

Areas of Study

When the conclusions of the study are completed, there are a number of points which are expected to be answered. The first of these is whether there exists an enthusiastic spirit among instructional media administrators at medical schools in New York State in the form of willingness to share software materials.

Another area to be explored involves certain conditions at medical schools in New York State. Are they such that a consortium-type program to facilitate the shared distribution of media software materials can succeed under the following conditions (not all-inclusive): 1) the schools would be willing to buy media programs in software form at the cost of duplication and shipping, 2) production capabilities differ, thus creating a significant difference in the types of software owned and used, and 3) faculty members at respective medical schools would find value in access to certain types of

programs owned by other medical schools in New York State?

Perhaps the most crucial hypothesis overall is that a consortium for the shared distribution of media software mate-reials is considered a favorable manner in which to obtain programs at low cost.

A fourth question involves a hypothetical listing of programs owned and produced by medical schools in New York State. Would this be considered a valuable tool for use by medical media administrators?

Finally, do privately-run medical schools in New York State own and use fewer instructional media than state-affiliated medical schools?

Questions which must be answered

There are five basic fact-seeking questions which must be answered, from which conclusions on the thesis may be drawn. The first of these questions is: What kinds of media materials are produced in-house at medical schools in New York State and how many of each are produced?

The second question is: What kinds of media materials are purchased from commercial media dealers and how many of each are purchased?

The third essential question is: Are media materials being shared among medical schools in New York State as a result of an organized agreement among the schools?

The fourth question is: Are medical school faculty willing to participate in sharing programs for media software

with other medical schools in New York State?

The final question is: In which subject areas is the use of instructional media most prevalent at medical schools in New York State?

Purposes of the Study

There are three main purposes of this study. They are equal in importance and mutually inclusive for the validity of the thesis.

The first purpose is to show a history of instructional media as used in medical education. This will be done to gain an understanding for the evolution of instructional media in medical education and to show what is practically possible under given conditions.

The second purpose of the study is to gather data via a survey questionnaire from media administrators at medical schools in New York State to assess present-day practices and attitudes surrounding the use of instructional media at those institutions.

The third purpose of the study is to interpret the data which will have been fathered and, in doing so, determine the validity of the hypothesis.

Assumptions and Limitations

It is assumed for purposes of this study that the media administrators surveyed will be truthful and accurate in their answers.

The survey will be limited to medical schools in New

York State.

The survey will be limited to eight categories of media software: posters, still photos, models, motion film, videotape, audiotape, 35mm slides, and overhead transparencies.

CHAPTER TWO

REVIEW OF
RELATED LITERATURE

CHAPTER II

REVIEW OF RELATED LITERATURE

Historical Perspective

The most famous of all medical educators, Hippocrates, taught his students through lecture-demonstration of procedural methods on actual patients. This educational technique remains basic to medical education everywhere.

Just as all texts were, at one time, handwritten, medical literature was duplicated in this manner and distributed by medical educators to facilitate the growing numbers of students.

The largest single advancement, not only in medical communications but in man's total communications evolution, was Gutenberg's printing press in 1455. This not only enabled the printed word to be circulated with greater efficiency, but also permitted clinical drawings to be printed through the use of woodcuts.

Photography was first used for medical purposes in 1543 when the book De Humani Corporis Fabrica by Vesalius exhibited pictures made by the camera obscura. This forerunner of the modern camera consisted of "a dark chamber or room with a hole (later a lens) in one wall through which images of objects outside the room were projected on the

opposite wall."[1]

In 1884, George Eastman invented the first flexible photographic film, and many physicians became amateur photographers because of its ease of use. These physicians found photography a convenient way to keep records of selected cases.

The first comprehensive text on medical photography was written by Albert Londe in 1893.[2]

With Eastman's introduction of color transparency film in 1936, the applications of medical photography were boosted to an even greater magnitude, and medical slides became a commonplace collection.[3]

Motion pictures were used in medicine as early as 1891 and featured short subject actions such as gait, visible symptoms, and surgical procedure.[4] Since it was necessary to send the entire camera out for film processing at that time, film length was restricted to about four minutes. In 1915, however, larger cameras and more readily available development processes paved the way for longer films. In 1923, 16-millimeter

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[1]Encyclopaedia Brittanica.

[2]Albert Londe, Photographie Medicale, (Paris: Gauthier-Villars et Fils, 1893).

[3]S.T. Teoh,"Central Facilities, Faculty of Medicine, University of Malaya, Malaysia, Educational Broadcasting International, September, 1976.

[4]Ruth C. Wakerlin, "An Overview of Motion Pictures in Medical Education", Journal of Medical Education, 46:592, 1971.

film was born, and four years later motion pictures with sound were being used with success. In 1935, Eastman's Kodachrome made color motion picture photography possible, and medical applications were found in its ability to differentiate pathologic conditions through truer color renditions than the black and white process previously in use.

By 1950, even though technical achievements made possible most of the audiovisual techniques in use today (except computer and videotape applications), medical educators were, as a whole, not convinced of its effectiveness. They maintained the traditional methods of lecture, textbook, live patient and cadaver in the education of medical students. Self-paced methods, such as those allowing a student to take examinations when they feel prepared, were unheard of in the United States, and instructional media were used chiefly during lectures by those professors who managed to find a motion picture film or set of slides pertaining to their subject matter. Cataloging was poor and those institutions which owned collections of audiovisual software found them virtually untouched by students and faculty. Hardware was cumbersome and confusing, discouraging even the most willing user.

By 1962, forty-seven medical schools in the United States were using live closed-circuit television for various purposes, but only four schools owned videotape recorders. As use of videotape increased, its presence was restricted to

the larger schools which maintained production capability. Those without an entire videotape operation including production studio had very few sources from which to acquire tapes of pertinent subject matter. In addition to this limitation, there was no industry standard regarding sizes of videotape, so that any school buying videotape hardware risked the probability of obsolescence of its investment.[5]

As the bulk of disorganized instructional media efforts became apparent, as well as its tremendous potential, the federal government became interested in the positive development of audiovisual materials in the nation's medical schools. At the Surgeon General's Conference on Health Communications in 1962, it was stated that libraries should be the source of this development, and that medical libraries in particular should systematically expand to include communications advances other than books.

> Departure from the narrow and traditional view of technical libraries should lead to having in the modern library communication aids such as films, tape recordings, video tapes, programmed learning courses, and the equipment and services necessary to exploit newer means of communication and education.[6]

The government's call did not go unheeded, largely due

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[5]Richard S. Christian and Lawrence Creshkoff, "Videotape Use in Health Care," Educational and Industrial Television, Surgeon General's Report, V.6, #7:p. 8, 1974.

[6]Robert S. Warner, M.D., "New Audio-Visual Methods in Postgraduate Medical Education," Journal of the Biological Photographic Association, 22:150-160, 1954.

to substantial allocations earmarked in the federal budget for instructional media development in all phases of education, including medical schools. This development becomes apparent in the following section.

Utilization and Effectiveness

The varieties of instructional media in use in medical schools around the world appear to be growing rapidly. Institutions are finding media adaptable to specific learning requirements and, as standardization of media becomes a realization, sharing systems are being established with measured success. An overview of possible avenues for instructional media in medical education will be presented here with case studies.

One of the most popular audiovisual sources in medical education today is the combination slide-tape format. These are most often used as 35-millimeter slides with cassette tapes. Other audio sources are used, however, including disc recordings and reel-to-reel tape recordings. In 1954, Dr. Robert S. Warner, Director of the University of Utah College of Medicine, reported on the use of Audio Visual Seminar Kits as a tool for continuing education at his institution:

> These A-V kits have been used by the physician in his office or in his home, by small groups of physicians at medical meetings, and some have been presented in the smaller hospital staff conferences. Although the experience with the kits has been limited, most of the physicians feel that the material presented is of definite educational value and feel that the opportunity to see

and hear such a medical discussion is very beneficial.[7]

In Britain, a system was reported in use in 1968 for the teaching of dermatology. The hardware consisted of a reel-to-reel tape machine synchronized with a 35mm front-projected slide projector. It was set up so that the student was not confused by extraneous controls.[8]

Research in London in 1965 using an open reel tape machine synchronized with a 35mm slide projector in the teaching of electrocardiography elicited the following conclusion from the researchers:

> Programmed instruction in electrocardiography presented by a teaching machine produced results just as good as very carefully prepared lectures. For academically poorer students and for those whose native tongue was other than English, the programme was probably the more effective teaching method. In this experiment women appeared to learn better from lectures and men from the programme, but further study is required to confirm the generality of this result. The students reacted favourably to programmed instruction and to teaching machines and expressed their preference for these over conventional methods of learning."[9]

The Kindermann teaching machine consists of an automatic slide projector used with rear screen projection and a tape recorder for soundtrack and synchronizing tones.

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[7]Robert S. Warner, M.D., "New Audio-Visual Methods in Postgraduate Medical Education," Journal of the Biological Photographic Association, 22:150-160, 1954.

[8]R.R. Phillips, "An Audio-Visual Teaching Unit for Dermatology," British Journal of Dermatology, 80:406, 1968.

[9]S.G. Owen, J Anderson, R. Hall and G.A. Smart, "Programmed Learning in Medical Education," Postgraduate Medical Journal, 41:201-204, 1965.

At chosen points, the tape also has metal foil which triggers a stop switch when a student response point is reached. When the response is completed, the student presses a restart button to continue the program. A group of London researchers in 1969 conducted comparative studies with the Kindermann machines against traditional lecture methods of teaching:

> A group of 4th year medical students were taught part of an endocrinology course by programmed tape-slide presentations in place of conventional lectures. Kindermann audiovisual tutor machines and audio-cassette tape players with automatic hand viewers were used. The students taught in this way significantly improved their position in the class and reacted favourably to the experiment.[10]

Self-instructional programs of various types utilizing media are constantly being evaluated for use in the basic medical sciences. A 1973 study of students of microscopic anatomy reported "no statistical differences in practical examination means between the control group taught by the classical laboratory procedure and that of the self-instructional students. This was true despite the fact that there were real differences in time input. ... the experimental group had formal contact with the program only two hours per week while the control students had six hours lecture-laboratory per week."[11]

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[10]R.McG. Harden, W.R. Dunn, C. Holroyd, Rosemary Lever, Anne Lindsay & G.M. Wilson, "An Experiment Involving Substitution of Tape/Slide Programmes for Lectures," The Lancet, (London: May 3, 1969).

[11]Raymond H. Kahn, James J. Conklin & Roy A. Glover, "A Self-Instructional Program in Microscopic Anatomy," Journal of Medical Education, 1973.

Two similar experiments in biochemistry at the University of Texas Health Center at San Antonio yielded these reactions:

> The students not only chose self-instruction as the most efficient method but also performed better on the examination after using it.[12]

> It is clear from the data that the Personalized System of Instruction students made use of the self-pacing feature and that they learned at least as much material while considering their course to be better and more enjoyable than did the students in the lecture system.[13]

The use of instructional media materials was studied among those students who were in an advanced stage of their medical education:

> This study demonstrated that a multimedia package utilizing the self-teaching concept was an acceptable supplement to an existing family practice preceptorship program. Participating students not only demonstrated favorable attitudes and improved knowledge scores on the instruments utilized in the study but also expressed a genuine interest and desire to review other self-teaching programs. The portability of the hardware system and the diverse selection of self-instructional material appeared to be prime factors in generating student interest.[14]

Using audiotape as an instructional tool, medical schools find it allows the student to observe a specimen or model without having to refer to a written text for explanation. A

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[12]Harold B. White, Thomas M. Smith & Louis L. Sulya, "Self-Instructional and Audiovisual Methods of Teaching Bio-Chemistry Laboratory," Journal of Medical Education, 1973.

[13]Robert A. Weisman & David M. Shapiro, 'Personalized System of Instruction (Keller Method) for Medical School Bio-Chemistry," Journal of Medical Education, V.48: 1973.

[14]John P. Geyman & Rick Guyton, "Evaluation of Multimedia Self-Teaching Programs for Medical Students Taking Community Preceptorships," Journal of Medical Education, 49:1062-1064, 1974.

British medical school, using single premise audiotapes to guide students in the study of histopathological specimens reported the following:

> The method has been found to be an agreeable way of learning and eliminates the tiresome alteration between the microscope and a printed text.
>
> Primarily developed to ease the burden of repeated histological tuition to small groups of students, tape recorded commentaries have several other advantages, which include improved accuracy and clarity of description, active participation by the student, standardization of histological teaching, and ease of revision and editing.[15]

A comparative study conducted in 1975 involved the use of audiotape against the traditional lecture in a medical pharmacology course:

> Data obtained in this study indicate that medical students can learn complex subject matter in an audio-based format as well as or better than in a lecture format. This conclusion is based on the finding that the upper 75 percent of students in both the groups performed equally well on the posttest, whereas the bottom scoring quartile of students in the audio-based group performed at a significantly higher level than the comparable lecture group.[16]

The use of motion picture films in medical education has, from its inception, been regarded as most effective when conveying a message centered around motion itself. This motion may be a clinical symptom, a dramatized study, or skill

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[15]Stewart Fletcher & Alan A. Watson, "Magnetic Tape Recording in the Teaching of Histopathology," British Journal of Medical Education, 2:283-292, 1968.

[16]Phyllis Bogner, Abdul W. Sajid & David L. Ford, "Effectiveness of Audio-Based Instruction in Medical Pharmacology,", Journal of Medical Education, 50:677-682, 1975.

reinforcement:

> In (Wendell-Smith's) study measuring the effect of film on grades for dissection received by anatomy students, comparison of grades of viewers and non-viewers showed that viewing the film improved dissecting performance, especially among below average students.[17]

The nation's medical schools seem to agree on the positive value of films in their teaching. The demand to borrow films from the American Medical Association film library soared from 4,328 to 14,064 per year in a ten-year period.[18]

Another instructional medium which captures motion is videotape. In 1954, Salt Lake City claimed to have conducted the first use of open-circuit commercial television for medical education. This series of television clinics was aired at a time when the general public was thought least likely to be watching television, to maintain a low-key profile to the airings. They were not publicized except within the medical profession. Of the 342 physicians who viewed one or more of the television clinics (48.9% of the total physicians in the viewing area), 75% said they gained new medical facts, 66% preferred this type of television to other forms of ongoing education, and 5% said they objected to medical television

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[17]Ruth C. Wakerlin, "An Overview of Motion Pictures in Medical Education," Journal of Medical Education, 46:592, 1971.

[18]Ralph P. Creer, "Use, Abuse and Misuse of Teaching Films," Canadian Medical Association Journal, 98:1090, 1968.

on that basis.[19] The use of television and videotape received equal praise around the nation and the world in medical education circles.

Mark Twain once said, "You can't depend on your eyes when your imagination is out of focus." With this premise in mind, psychiatry students under the direction of Dr. Harry A. Wilmer conducted patient interviews where the students tried various interview and diagnostic techniques.[20] The interviews were recorded on videotape for review by the group as a whole to evaluate. Through the use of these recordings, labelled "audiovisual biopsies," the performance of the student was constructively criticized by his peers and increased input on patient diagnosis was solicited.

A similar technique of physician/patient recordings for psychiatric learning through "patient care conferences" was seen to document valuable verbal and non-verbal cues:

> By making the patient-physician interaction directly observable, the videotape ... facilitates the recognition of (and teaching of) personality characteristics. Some characteristics seen on the recorded interviews are: (a) the patient with a medical illness who presents psychiatric symptomatology, (b) the patient with primary psychiatric illness presenting with medical symptomatology, (c) the patient who uses pain to communicate loneliness and depression, (d) the patient who exaggerates or minimizes pain, and (e) the patient who withholds information to test the doctor's competence.

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[19]Robert S. Warner, M.D., "New Audio-Visual Methods in Postgraduate Medical Education," Journal of the Biological Photographic Association, 22:150-160, 1954.

[20]Harry A. Wilmer, "Television as a Participant Recorder," American Journal of Psychiatry, 124:9, 1968.

> The students generally like to view themselves. It seemed that their enjoyment in being a doctor to medical out-patients was enhanced by the opportunity to see themselves in that role. They were able to view their social competence; they could observe the results of their interview technique with the assistance of peer and supervisor's opinion. In the student's quest for role identity, perhaps the familiar student comment, "I want to see patients," may be reinterpreted as, "I want to see myself with patients." In contrast to this enjoyment, the correction of errors, a traditional orientation of medical teaching, was also facilitated by the student's confrontation with himself.[21]

The use of videotape showed effectiveness in improving the performance of a surgical team. After one operation at the Temple University Health Sciences Center, teams viewed videotapes of the procedures to understand the extent of "irrelevant motions" during those procedures:

> Irrelevant motions by surgeon and assistant within the operative field delay the completion of the operation, may injure the tissues, occur frequently, and are usually unnoticed at the time of the operation. These movements seem to represent a need for action at times of uncertainty. We excluded relevant finger dissection, palpation, sponging or instruction from these counts. Team A committed 96 inappropriate moves at first operation and reduced them to 12 at their second. Team B decreased theirs from 65 to 9 while Team C, without videotape review, showed an increase (in inappropriate moves).[22]

At Mount Sinai Hospital in New York City, television is being used to make tapes of microneurosurgical procedures

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[21]John D. Stoeckle, Aaron Lazare, Charles Weingarten & Michael T. McGuire, "Learning Medicine by Videotaped Recordings," Journal of Medical Education, 46:518-524, 1971.

[22]Leonard Goldman, Willis P. Maier, George P. Rosemond, Stanton W. Saltzman & Lester M. Cramer, "Teaching surgical technique by the critical review of videotaped performance - the surgical instant replay," Surgery, 66:237-241, 1969.

available to the staff.[23] Before the use of television, the only persons able to view the operative procedures of microsurgery were the surgeon and perhaps one other with the aid of an observation tube. Without these tubes, microsurgery would be impossible. At Mount Sinai, color cameras are used to bring the images of microneurosurgery to monitors in the operating room and in doctors' offices. Some procedures are taped for further review.

Another more common use for television in medical education is exemplified at the Boston University School of Nursing. Videocassettes are used there, providing the school with a standardized format with other institutions using the same software. Videocassettes are in this way useful to Boston University as a whole. The Boston University School of Nursing also maintains an in-house television studio and supplements needed programs they are unable to produce with a commercial purchase policy, allocating funds for videotapes produced by other concerns. The ease of use of videocassettes has been found to be helpful in the Nursing School's self-paced learning programs.[24]

A cable television system in London sends videotapes to some medical postgraduate centres which do not receive the cable signal. The Inner London Education Authority sends

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[23]James C. Cope, "Televising Microneurosurgery," Educational and Industrial Television.

[24]Edward Zides, "Videocassettes at the Boston University School of Nursing," Videoplay Magazine, 7/74, p.25.

programs of many disciplines down their cable, and finds that television is useful in its ability to adapt to other media such as film, photography, graphics, radiography and micrography. The problems which faced the ILEA in administering this system came in what are now predictable ways:

> Already in 1971 the problem of multiple formats was to arise. Few institutions then possessed the 1" IVC helical scan recorders which we used in London, but fortunately we owned an Ampex 1" and a Sony ½" VTR and were able to supply copies in these, the two commonest formats of the period.
>
> The problems of creating and running a video-library are of five kinds, concerned with the quality and copyability of the master recording, the multiplicity of types of video-recorder in use, the difficulty of quality control, users' unfamiliarity with television equipment and performance and the difficulty of describing the content.[25]

In 1972, the founders of Medical Educational Television (METV) evaluated the distribution of media software they began in 1967:

> .....METV is seen as being complementary to other forms of continuing medical education rather than completely satisfying the need for such education by itself. This information might be taken into account when broad programs of continuing medical education are being planned.
>
> It has been estimated that the cost of producing these METV programs was approximately $3,000 per 30-minute program. If it is assumed that about 500 doctors were regular program watchers, the cost per doctor was $6 per 30 minutes. These videotapes were, however, shipped widely throughout Canada and the United States, and so their total viewing audience is undoubtedly much larger than estimated here.[26]

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[25]Michael Clarke, "Production and Distribution of Postgraduate Medical Television," Educational Broadcasting International, 9/76

[26]A.T. Hunter & Bernard Portis, "Medical Educational Television Survey," Journal of Medical Education, 47:1972.

Louisiana State University is host for the Louisiana Hospital Television Network, a monthly two-hour live presentation transmitted by microwave to 10 cities including 20 hospitals and an estimated 4,000 physicians. The broadcasts are part of a continuing education program. The microwave is equipped for send and receive modes at each terminal, allowing the viewing physicians to ask questions and supply other feedback during the course of the presentations.[27]

Originating at the Emory University School of Medicine in Atlanta, the Georgia Regional Medical Television Network reports continued success in the use of 3/4" videocassettes:

> All of the GRMTN programs are distributed on 3/4U videocassette for replay on Sony, Panasonic, JVC, and other U-format machines. We chose this format because it is reliable and simple to use. ...We do our own duplicating, and each program may have from one to ten copies, depending upon its popularity. As topical programs become less popular, duplicate cassettes are erased and re-recorded.
>
> The staff of the medical library handles the cataloging, shipping, and return of the cassettes. All are sent by U.S. mail, using the standard Sony cassette mailers. To date none have been damaged in the shipping and only two have been lost - and this with a circulation rate that approaches 500 cassettes a month and is increasing steadily. Since the track record of the U.S. postal service is so good, we stopped insuring the cassettes in 1975.
>
> ... we are self-supporting and all of our funds come from membership subscriptions, sale, and rental for videocassette programs. The number of sales is not high

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[27]Harold J. Stephens, Jr., "'Doctor to Doctor' Via CCTV, Continuing Medical Education in Louisiana," Educational and Industrial Television, p. 11, 7/74.

since members can copy any program they use and keep it in their own libraries.[28]

In the northwest area of the United States, a medical education organization, WAMI (Washington, Alaska, Montana, Idaho), uses a satellite for two-way video transmission in holding courses, diagnostic consultation, and any other timely medical use:

> By sharing resources and dividing responsibilities through WAMI, the 4 states have been able to provide better training for more medical students and to encourage more doctors to practice in the doctor-short rural areas of the Northwest.[29]

The Pan Pacific Education and Communication Experiments by Satellite (Peacesat) is an operation which involves 12 nations in daily information sharing, averaging 18 hours of transmission per week. Peacesat claims to be the first and only international medical satellite network, the first intrastate satellite network in the United States, the first satellite network to offer courses for credit, and the first satellite library network. The satellite is used in conjunction with mailed videotapes for use in administrative planning, diagnostic counseling, medical library information, public information broadcasting, research, and, training and instruction.[30]

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[28]Alan S. Kaminsky & Sally Isaacs, "A Circulating Medical Library on Videocassettes," Educational and Industrial Television, p.41, 3/77.

[29]M.Roy Schwarz, "In the Northwest, It's WAMI," American Education, 5/76

[30]John Bystrom, 'Peacesat Experiment General Description 1971-76," Educational Broadcasting International, 9/76.

To some medical educators, as those involved in the Peacesat operation, the effectiveness of instructional media in medical education is evidenced in concrete ways almost daily. However, for some groups in medical education, educational value and cost-effectiveness of instructional media must be proven through sometimes elaborate evaluative efforts. The Steering Committee for Cooperative Teaching of the Association of Professors of Gynecology and Obstetrics conducted such an evaluative effort during the academic year 1971-1972. The Committee sent out a sample teaching aids package to participating schools and offered this rationale:

> The primary objectives of the committee in assembling and disseminating teaching aids packages were to demonstrate: (a) that improved teaching could be carried out using a variety of modalities and would work well when the student is given part of the responsibility for his own education and, (b) that excellent materials produced by enthusiastic, knowledgeable, and stimulating teachers of one facility with specific subject interests could be used effectively by medical students in other facilities. It was the plan that these materials would enhance current clerkship curricula and perhaps stimulate improvement and changes in course design as faculty reevaluate what and how they are helping students learn.[31]

Experimentation with the availability of learning resources within a particular institution was undertaken using Multi-Discipline Laboratories (MDL) and Laboratories for Learning Resources (LRL). The premise was the following:

> Information sources can be in the form of laboratory exercises, books, laboratory-lecture presentations,

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[31]Report from the Steering Committee for Cooperative Teaching of the Association of Professors of Gynecology and Obstetrics, "Faculty Reactions to an Instructional Media Network in North America," Journal of Medical Education, V.48, 1973.

slide-sound programs, films, videotapes, and computer programs as well as models, museum specimens, and charts.[32]

The overall result was the following:

> Experience with the LRL's indicates that use increases almost proportionately to the quantity and quality of the resource material available there and the relationship of this material to current curricula.[33]

In a 1971 study, physicians were asked to rank their preference for sources of continuing education. The end compilation of responses listed eight significant sources in order of preference:

1. Journals and Other Publications.
2. Postgraduate Courses.
3. Conventions.
4. Local Hospital Programs.
5. Audio Digest.
6. State Medical Society Meetings.
7. County Medical Society Meetings.
8. Television.

The conclusion of the study encouraged further pursuit of the usefulness of instructional media in continuing education for physicians:

> There needs to be continued evaluation of instructional media both in mass communications and "in-house" programming to identify those applications of subject matter

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[32]Edra L. Spilman, "The Laboratory for Learning Re-Sources," Journal of Medical Education, vol. 47, September, 1972.

[33]Ibid.

and the media that best facilitate the learner in his lifetime learning.[34]

The Lister Hill National Center for Biomedical Communications is an arm of the National Library of Medicine. In 1968, President Lyndon B. Johnson signed Senate Joint Resolution 193 to establish the Lister Hill Center in an effort to encourage "networks and information systems to improve health education, medical research, and delivery of health services.[35]

A justification for the Lister Hill Center was summarized for the medical community in a special edition of the "Journal of Medical Education:"

> The efficiency and effectiveness of medical education must be improved – and by means other than replacing today's patterns. The schools must find better methods to deploy the talents of their scarce and valuable faculty. The students are now demanding that a much higher priority be assigned their needs in medical school affairs. This means that more attention to educational processes is necessary, and this calls for a greater exploration of the potentiality of educational technology. These forces, coupled with virtual total familiarity with television and rapidly proliferating appreciation of computer science, add up to great pressures for change. Communications technology is properly appreciated as a highly potent catalyst toward many reforms demanded for both medical education and practice. Societal pressure generated by these demands cannot be ignored. This is an age and a society conditioned to instant communication and its benefits. The same is expected of the application of educational

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[34]Kenneth T. Denne, Mitchell Schorow, Sandra Vlicny & Donald Ulmer, "Mass Communication Media in Continuing Education," Journal of Medical Education, vol. 47, September, 1972.

[35]Eugene A Stead, Jr., Cheves McC. Smythe, C.G. Gunn & Mary H. Littlemeyer (editors), "Education Technology for Medicine: Roles for the Lister Hill Center," Journal of Medical Education, vol.46, No. 7, 7/71, Part 2.

technology to medical education.[36]

The cost/benefit ratios were considered in detail for the Lister Hill project, and attitudes were made clear:

> A biomedical communications network is not a means of achieving more for less. There is no evidence indicating that more educational experience can be distributed for the same sum of money via electronic communications. Rather a different mix of learning experiences and perhaps a richer and deeper set of learning experiences are to be expected.[37]

The Lister Hill Center, since its inception, has generated a number of programs aimed at sharing materials among medical schools. One national network includes 116 schools involved in the teaching of obstetrics and gynecology. Reactions to the effort are positive:

> Cooperative efforts in disseminating biomedical educational materials via a networking schema appear to be a feasible, practical approach to help alleviate the problem of providing more educational material to more students at a low cost.
>
> An effort of this magnitude requires the unselfish and enthusiastic effort of educators and students working as colleagues toward a common goal of educational achievement. It also requires adequate funding and the support of a national organization. The committee was fortunate in having all of these ingredients available. Perhaps the fact that these ingredients were so readily available reflects the general thinking that such programs are needed and can have an almost immediate and positive impact on medical education.[38]

AVLINE (Audiovisuals on Line) is a subset of MEDLARS

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[36] Stead, op. cit.

[37] Ibid.

[38] Morton A. Stenchever & Thomas C. Brown, "A Network for the Dissemination of Teaching Materials," Journal of Medical Education, vol. 47, September, 1972.

(Medical Literature Analysis and Retrieval), which serves as an index for print material for the medical profession in the same way the ERIC system provides references to anyone on the computer line which originates from Stanford University. For AVLINE, content and design experts convene to evaluate non-textbook materials for availability, suitability and quality.[39]

Results of a survey published in 1973 revealed that "Three times as many physicians rely on their own personal subscriptions as on hospital library holdings." In order to meet physicians' informational needs, the principals of the survey recommend that "local hospitals must ultimately face their responsibility to shift their hospital libraries from being an unattended, ill-equipped reading room to a mediated service-oriented multi-media learning resource center."[40]

In keeping with the Hippocratic theory that real-life experiences are the best teachers in medicine, a medical educator notes

> . . . that our potential effectiveness in instruction will vary directly with the extent to which we successfully approximate real experiences. We should not be content to provide students with representations of reality when it is within our power to bring them in touch with the genuine article. While an opportunity to see a carefully prepared videotape of the diagnosis and treatment

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[39]Norbert A Jones, August Swanson & Jenny Johnson, "Educational Materials Reviewed for AVLINE," Journal of Medical Education, vol.51:299-304, April, 1976.

[40]William P. Kouchan & John A. Timour, "Are Hospital Libraries Meeting Physicians' Information Needs?" Special Libraries, May/June, 1973.

> of diabetic coma is likely to be preferred to hearing the process described, neither approach has the potential value for the student of engagement in the direct care of a comatose patient. Can all experiences be real and purposeful? Possibly not. However, if a student decides to seek an understanding of glucose metabolism in order to help him treat a patient for whom he is responsible, his reading of a reference text becomes a real and purposeful experience. The self-instructional cartridge film or the programmed unit on glucose metabolism, which he might have selected instead of a reference text, would be even more effective, because they satisfy a larger proportion of the principles of communication and learning.[41]

The role of instructional media in medical education is seen by some as a dominant one for the future in order to accommodate the growing need for medical professionals in a future society. As in other phases of education, instructional media are offered as a solution to faculty availability and student location:

> (Medical students') preclinical studies could be carried out via a network of learning centers affiliated with the parent medical school. Curriculum would be self-paced. Large numbers of students could be added to the beginning classes. The medical university would admit of no physical walls. Those motivational skills needed by the beginning student would become the same skills needed for continuing his medical education at a later date. He would be taught communications as a basic prerequisite course in his first semester. How to listen, how to read, how to speak, how to utilize communications techniques to his advantage — these will become the foundation for self-continuation of one's own medical progress.[42]

In terms of hardware, future outlook on the implementation of medical education may be realized with the present

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[41]Jason Hilliard, M.D., Ed.D., "Evaluation of Audio-visual Methods in Medical Teaching," Canadian Medical Association Journal, vol. 98:1146-1150, 1968.

[42]David P. Lauler, M.D., "Communications in Medicine," Modern Medicine, vol.38:94-99, June 29, 1970.

incubation stages of the following, as they apply to medical education on a widespread basis: computer storage and retrieval, satellite transmission, cable television, picture-phone transmission, microwave transmission, microfiche data reduction, and other multi-media learning systems.

The testimony offered through the literature reviewed in this chapter is important in its demonstration of the evaluation of instructional media in medical education, current trends, and indications of possible avenues for the future of instructional media in medical education.

The most important discovery in the literature in relation to the thesis exists in the fact that sharing systems for instructional media software are working with measured success in medical communities of many sizes, and for various functions. In particular, the Lister Hill National Center for Biomedical Communications has established a national base for sharing instructional media materials, and on a regional level, the Georgia Regional Medical Television Network exemplifies a working program for the distribution of media software among medical schools.

The posture of instructional media usage at medical schools in New York State can be measured against the instructional media programs described in this chapter. However, each educational community is developed under unique circumstances and with specific goals, so the preceding can serve only as evidence of what is possible, and what has been proven

effective. Observing these qualifications, Chapter Five presents a summary of the most important data and literature.

CHAPTER THREE

DEVELOPMENT OF PROCEDURES AND INSTRUMENT

CHAPTER III

DEVELOPMENT OF PROCEDURES AND INSTRUMENT

Two possible methods were considered for the purpose of gathering information in support of the thesis.

One method was to conduct on-site interviews at the ten subject medical schools in New York State. Visits to the medical schools would involve firsthand observations of the ways instructional media are being used at each school. Interviews would be conducted with key personnel including media specialists, administrators, and faculty, whose attitudes and opinions would be polled on the feasibility of a statewide media-sharing consortium. The data gathered would be in response to the "Questions to be answered" as detailed in Ch. I.

The other method considered was the gathering of data through a questionnaire. This was the method chosen for use in this study. Among the advantages to the questionnaire method was its cost, certainly less than travelling the state for personal interviews, and its uniformity, in that all of those polled would be asked the questions in exactly the same manner. This was also seen as a factor in the objectivity of the method. Overall, the questionnaire method provided a convenient, efficient way to gather significant information and opinions concerning instructional media at the ten medical schools in New York State.

The survey questionnaire consisted of three pages with

a total of 15 questions for 43 points of response. It required responses specific enough to determine overall trends. A cover letter was included to explain the purpose of the questionnaire and to motivate response.

The development of the questionnaire was carried out with close attention to the original questions developed in Chapter One. It evolved to its final form through a systematic process which included three essential considerations. The first of those was that the material content directly address the content-question areas which were most important to the study. Low priority questions were recognized by the author, with assistance from Dr. James R. Treble of the Ithaca College School of Communications, in early drafts and were eliminated or revised to focus the scope of the questionnaire within the limits of pertinent information and opinion. The second essential consideration was adaptability. It was designed to accommodate a variety of answers possible for each question. The third essential consideration was that of simplicity and brevity. The questionnaire was designed so that it would not be too cumbersome for the recipients to complete without extensive references, and so that it could be finished quickly enough to ensure its speedy return.

The questionnaires were sent to media specialists or appropriate administrators at the ten medical schools in New York State. The cover letter explained the purpose of the study and promised a compiled set of results from all schools responding to all the other schools which responded. There was no cost to the participants for returning the questionnaire

as stamped, self-addressed envelopes were provided.

The summary and analysis of these data obtained in the survey will be accomplished through the use of descriptive statistics: percentages, measures of central tendency (mean, median and mode), and range.

Question #1 was, "How many faculty members at your school use any kind of instructional media in their teaching?" The five response choices were 0-20%, 20-40%, 40-60%, 60-80% and 80-100%. This question was entered to assess the popularity of instructional media among medical school faculty in New York State so that comparisons could be made between the responding institutions.

Question #2 was, "On an annual basis, approximately how many instructional materials are produced in-house utilizing the following types of software?" The eight categories included in this and the three questions which follow are posters, still photographs, scale models, motion picture film, videotape, audiotape, 35mm slides and transparencies. Question #3 was, "On an annual basis, approximately how many instructional materials are purchased in the form of the following types of software?" Questions #2 and #3 were posed to determine the tendencies of the responding institutions regarding acquisitions of software materials.

Question #4 was, "Faculty members submit requests for commercially pre-produced materials you do not own for the following types of software." The response choices for each of the eight media categories were never, seldom, sometimes

and often. This question is to establish the present demand by medical school faculty for such materials. Question #5 was, "Faculty members would find value in access to programs which are produced and/or owned by other medical schools in New York State in the form of the following types of software." The response choices for the eight media categories here were probably not, maybe good chance, and surely. This question is seeking a probability judgement of the media administrator regarding faculty attitudes toward borrowing media materials from other institutions.

Question #6 was, "You receive requests from other medical schools in New York State for commercially produced media materials your institution owns: often, sometimes, seldom, never." Question #7 was, "You have lent commercially produced materials your institution owns to other medical schools in New York State: often, sometimes, seldom, never." Question #8 was, "You have lent materials your institution has produced to other medical schools in New York State: often, sometimes, seldom, never." These three questions were designed to determine the flow of borrowed materials between medical schools in New York State. This flow may indicate whether an organized sharing system would be helpful in handling instructional media materials.

Question #9 was, "You would find it a valuable opportunity to borrow or exchange materials produced by other medical schools in New York State: often, sometimes, seldom, never." Question #10 was, "You would find it a valuable

opportunity to borrow or exchange materials produced by other medical schools in New York State: often, sometimes, seldom, never." These questions were entered to gather the opinions of the respective media administrators regarding their outlook on sharing the two categories of media programs. This information is valuable in determining whether enough interest exists to justify an organized system of sharing such programs.

Question #11 was, "Do you know of any attempts to implement a sharing system for instructional media materials between two or more medical schools in New York State?" Knowledge of such an attempt and its success or failure would enhance the findings of this study. Question #12 was, "Would your faculty and/or staff find value in such a system?" This, again, is asking the media administrators to speculate on the potential of a media software sharing system. These professional opinions will be reported accordingly.

Question #13 was, "Would your faculty and/or staff find value in media materials available from other medical schools in New York State at the cost of duplication?" (porbably not, maybe, good chance, surely). This question is the only one which deals with financial considerations in a direct manner, and is offered to assess the appeal of such a proposition aside from discussing the educational value of any given material.

Question #14 was,"Would it be valuable for all concerned at your institution to have available a catalog of programs owned (purchased and produced) by other medical

teaching institutions in New York State?" (probably not, maybe, good chance, surely). This question seeks the collective attitudes of the media administrators regarding what might be an initial step in forming a system of media software materials, the circulation of program titles. Awareness is the first step to a call for action.

Question #15 was, "Please indicate any areas of instruction where the use of instructional media is particularly evident." This question was designed to determine if there is any significant concentration of subject matter in the use of media materials at the surveyed institutions.

The final invitation for remarks on the questionnaire stated, "Additional comments on any questions are welcome on these or attached papers. Thank you." This was entered so that respondents would feel the freedom to qualify any of their answers if this would make them more comfortable with the questionnaire as returned.

These data from the questionnaire were evaluated for their concurring and differing factors consistent with the assumptions of this study. In addition, trends involving information and opinions as indicated by the data will be discussed.

Assumptions of the Survey

For the purpose of making meaningful conclusions for this study, there are three major assumptions on the data compiled from the questionnaires.

The first is that the respondents complete the

questionnaire in total honesty according to the facts as they know them.

The second assumption is that the responses to the questionnaires are accurate in terms of actual use of media at medical schools in New York State.

The third major assumption is that the individuals responding to the questionnaires are media administrators at medical schools in New York State or have firsthand knowledge of the facts requested.

CHAPTER FOUR

ANALYSIS OF THE FINDINGS

CHAPTER IV

ANALYSIS OF THE FINDINGS

Administration of the Survey Instrument

On or about June 20, 1977, one copy of the questionnaire was sent to each of these ten medical schools in New York State:

1. Cornell University Medical College.
2. New York Medical College.
3. New York University School of Medicine.
4. State University of New York Downstate Medical Center.
5. Albany Medical College of Union University.
6. State University of New York at Buffalo School of Medicine.
7. Albert Einstein College of Medicine of Yeshiva University.
8. Columbia University College of Physicians and Surgeons.
9. University of Rochester School of Medicine and Dentistry.
10. State University of New York Upstate Medical Center.

All of the questionnaires were returned within a twelve-week period. Some telephone prompting to media administrators was necessary to accelerate the return of certain questionnaires.

Media Sharing Policies and Trends

One of the central questions to be answered by this study was to determine if sharing policies and practices for media software materials existed among medical schools in New York State. Analysis of the returned questionnaires indicated that six medical schools knew of attempts to start a sharing system for instructional media software. They were Cornell University Medical College, New York University School of Medicine, Albany Medical College of Union University, Columbia University College of Physicians and Surgeons, the University of Rochester School of Medicine and Dentistry, and the State University of New York Upstate Medical Center College of Medicine. Four schools said they knew of no attempts to start such a system. They were the New York Medical College Flower and Fifth Avenue Hospital, the State University Downstate Medical Center, the State University of New York at Buffalo School of Health Sciences, and the Albert Einstein College of Medicine of Yeshiva University. The study revealed no presently organized system for the sharing of media software materials among medical schools in New York State. (See Table I)

An indication of the desire for sharing media materials was found in response to the questionnaire. Survey question number 13 asked, "Would your faculty and/or staff find value in media materials available from other medical schools in New York State at the cost of duplication?" Only one respondent checked the lowest possible indicator (Probably Not); the

TABLE I

QUESTION #11

"DO YOU KNOW OF ANY ATTEMPTS TO IMPLEMENT A SHARING SYSTEM FOR INSTRUCTIONAL MEDIA MATERIALS BETWEEN TWO OR MORE MEDICAL SCHOOLS IN NEW YORK STATE?"

MEDICAL SCHOOL	YES	NO
Albany Medical College	X	
Columbia University College of Physicians and Surgeons	X	
Cornell University Medical College	X	
Albert Einstein College of Medicine		X
New York Medical College		X
New York University School of Medicine	X	
State University of New York Downstate Medical Center		X
State University of New York at Buffalo School of Health Sciences		X
State University of New York Upstate Medical Center College of Medicine	X	
University of Rochester School of Medicine	X	
TOTAL	6	4

average response on the scale of 0 to 3 (0=Probably Not, 1=Maybe, 2=Good Chance and 3=Surely) was 1.7. Also, six respondents indicated they had loaned media materials to other medical schools in New York State. They were the New York Medical College Flower and Fifth Avenue Hospital, the State University of New York Downstate Medical Center, the State University of New York at Buffalo School of Health Sciences, the Albert Einstein College of Medicine of Yeshiva University, the University of Rochester School of Medicine and Dentistry, and the State University of New York Upstate Medical Center College of Medicine. (See Table II)

In-House Productions vs. Commercial Purchases: Lending

In terms of the frequency at which media materials were actually loaned from one medical school to another within New York State, a slightly higher rate of lending of in-house productions than commercially produced media materials was shown. This was determined through computation of the average rates of lending based on the ten medical schools' individual rates of lending on the scale of 0 to 3 (0=Never, 1=Seldom, 2=Sometimes, 3=Often). The average rate of lending for commercially produced materials was .9 (see Table III) and the average rate of lending for media materials produced in-house was 1.1. (See Table IV)

It was found that medical schools in New York State, as a group, had a desire for increasing the exchange of instructional media materials above the existing frequency of

TABLE II

QUESTION #13

"WOULD YOUR FACULTY AND/OR STAFF FIND VALUE IN MEDIA MATERIALS AVAILABLE FROM OTHER MEDICAL SCHOOLS IN NEW YORK STATE AT THE COST OF DUPLICATION?"

MEDICAL SCHOOL	Probably Not	Maybe	Good Chance	Surely
Albany Medical College			X	
Columbia University College of Physicians and Surgeons		X		
Cornell University Medical College		X		
Albert Einstein College of Medicine		X		
New York Medical College			X	
New York University School of Medicine	X			
State University of New York Downstate Medical Center			X	
State University of New York at Buffalo School of Health Sciences			X	
State University of New York Upstate Medical Center College of Medicine				X
University of Rochester School of Medicine				X
TOTAL	1	3	4	2

TABLE III

QUESTION #7

"YOU HAVE LENT COMMERCIALLY PRODUCED MATERIALS YOUR INSTITUTION OWNS TO OTHER MEDICAL SCHOOLS IN NEW YORK STATE: (NEVER, SELDOM, SOMETIMES, OFTEN)"

MEDICAL SCHOOL	
Albany Medical College	No answer
Columbia University College of Physicians and Surgeons	Never
Cornell University Medical College	Never
Albert Einstein College of Medicine	Sometimes
New York Medical College	Seldom
New York University School of Medicine	Never
State University of New York Downstate Medical Center	Never
State University of New York at Buffalo School of Health Sciences	Often
State University of New York Upstate Medical Center College of Medicine	Sometimes
University of Rochester School of Medicine	Never

TABLE IV

QUESTION #8

"YOU HAVE LENT MATERIALS YOUR INSTITUTION HAS PRODUCED TO OTHER MEDICAL SCHOOLS IN NEW YORK STATE: (NEVER, SELDOM, SOMETIMES, OFTEN)"

MEDICAL SCHOOL	
Albany Medical College	Never
Columbia University College of Physicians and Surgeons	Never
Cornell University Medical College	Never
Albert Einstein College of Medicine	Seldom
New York Medical College	Seldom
New York University School of Medicine	Never
State University of New York Downstate Medical Center	Often
State University of New York at Buffalo School of Health Sciences	Sometimes
State University of New York Upstate Medical Center College of Medicine	Often
University of Rochester School of Medicine	Seldom

exchange. This was true for both in-house and commercially produced materials.

In-House Productions vs. Commercial Purchases: Borrowing

Among the ten medical schools surveyed, in-house productions outnumbered commercial purchases of media software programs in all eight software categories (posters, still photos, models, motion film, videotape, audiotape, 35mm slides, and overhead transparencies.

When the medical media administrators were asked to rate the potential value in opportunities to borrow either in-house media productions or commercial media programs from other medical schools in New York State, there was no outstanding difference between the overall averages respective to the two categories. (Tables V, & VI) Using a scale to replace the four choices offered on the questionnaire (0=Never, 1=Seldom, 2=Sometimes, 3=Often), in-house productions rated an overall average of 1.8 and commercial productions rated an overall average of 1.9. The similarity in averages was due to the fact that all the medical schools surveyed except one answered with the same response on both questions 9 and 10. Albany Medical College of Union University was the only respondent with different answers, indicating "Seldom" for in-house productions (question 9) and "Sometimes" for commercial productions (question 10). (See Tables VII & VIII)

TABLE V

QUESTION #2

"ON AN ANNUAL BASIS, APPROXIMATELY HOW MANY INSTRUCTIONAL MATERIALS ARE PRODUCED IN-HOUSE UTILIZING THE FOLLOWING TYPES OF SOFTWARE?"

MATERIAL	
POSTERS	4,749
STILL PHOTOS	63,354
MODELS	11
MOTION FILM	49
VIDEOTAPE	615
AUDIOTAPE	2,050
35mm SLIDES	122,000
TRANSPARENCIES	1,870
TOTAL	194,698

TABLE VI

QUESTION #3

"ON AN ANNUAL BASIS, APPROXIMATELY HOW MANY INSTRUCTIONAL MATERIALS ARE PURCHASED IN THE FORM OF THE FOLLOWING TYPES OF SOFTWARE?"

MATERIAL	
POSTERS	110
STILL PHOTOS	3,000
MODELS	8
MOTION FILM	335
VIDEOTAPE	225
AUDIOTAPE	85
35mm SLIDES	1,255
TRANSPARENCIES	26
TOTAL	5,044

TABLE VII

QUESTION #9

"YOU WOULD FIND IT A VALUABLE OPPORTUNITY TO BORROW OR EXCHANGE MATERIALS PRODUCED BY OTHER MEDICAL SCHOOLS IN NEW YORK STATE: (OFTEN, SOMETIMES, SELDOM, NEVER)"

MEDICAL SCHOOL	
Albany Medical College	Seldom
Columbia University College of Physicians and Surgeons	Sometimes
Cornell University Medical College	Sometimes
Albert Einstein College of Medicine	Seldom
New York Medical College	Seldom
New York University School of Medicine	Sometimes
State University of New York Downstate Medical Center	Sometimes
State University of New York at Buffalo School of Health Sciences	Sometimes
State University of New York Upstate Medical Center College of Medicine	Often
University of Rochester School of Medicine	Sometimes

TABLE VIII

QUESTION #10

"YOU WOULD FIND IT A VALUABLE OPPORTUNITY TO BORROW OR EXCHANGE COMMERCIALLY PRODUCED PROGRAMS OWNED BY OTHER MEDICAL SCHOOLS IN NEW YORK STATE: (OFTEN, SOMETIMES, SELDOM, NEVER)"

MEDICAL SCHOOL	
Albany Medical College	Sometimes
Columbia University College of Physicians and Surgeons	Sometimes
Cornell University Medical College	Sometimes
Albert Einstein College of Medicine	Seldom
New York Medical College	Seldom
New York University School of Medicine	Sometimes
State University of New York Downstate Medical Center	Sometimes
State University of New York at Buffalo School of Health Sciences	Sometimes
State University of New York Upstate Medical Center College of Medicine	Often
University of Rochester School of Medicine	Sometimes

Faculty Usage and Attitudinal Factors

Survey respondents showed that all schools estimated at least 20-40% of their faculty used some form of instructional media. Five of nine schools reporting claimed faculty usage at 80-100%. The State University of New York at Buffalo School of Health Sciences and Columbia University College of Physicians and Surgeons reported the lowest figures for faculty usage at 20-40%. The five schools who reported faculty usage of instructional media at 80-100% were the New York University School of Medicine, the State University of New York Downstate Medical Center, Albany Medical College of Union University, Albert Einstein College of Medicine of Yeshiva University, and the State University of New York Upstate Medical Center College of Medicine. (See Table IX)

As indicated by the medical media administrators surveyed, faculty at medical schools in New York State would find a valuable use for materials produced at other medical schools. The value in these materials was seen as greater than the value in commercially produced programs which are owned by other schools in New York State. (See Table VII & Table VIII)

In terms of medical schools/ faculty willingness to participate in a media software sharing program with other medical schools in New York State, the consensus among those surveyed showed a 1.8 on the 0 to 3 scale. Half of the participants indicated a positive response concerning a media software sharing system. None of the medical schools indicated

TABLE IX

QUESTION #1

"HOW MANY FACULTY MEMBERS AT YOUR SCHOOL USE ANY KIND OF INSTRUCTIONAL MEDIA IN THEIR TEACHING?"

MEDICAL SCHOOL	0-20%	20-40%	40-60%	60-80%	80-100%
Albany Medical College					X
Columbia University College of Physicians and Surgeons		X			
Cornell University Medical College*					
Albert Einstein College of Medicine					X
New York Medical College			X		
New York University School of Medicine					X
State University of New York Downstate Medical Center					X
State University of New York at Buffalo School of Health Sciences		X			
State University of New York Upstate Medical Center College of Medicine					X
University of Rochester School of Medicine				X	
TOTAL	0	2	1	1	5

* Indicated "don't know" for Question #1.

the lowest choice of "Probably Not." (See Table X)

The desire to buy media materials at the cost of duplication, according to the medical schools surveyed, was just below that for the media software sharing system itself. On the 0 to 3 scale, the overall rating for the availability of programs at the cost of duplication was 1.7, versus a 1.8 overall rating for a media software sharing program. (See Table XI)

Catalog of Media Software

The questionnaire specifically addressed the possibility of a catalog of programs owned by medical teaching institutions in New York State. The response to this was positive. On the scale of 0 to 3 (0=Probably Not, 1=Maybe, 2-Good Chance, 3=Surely), the collective outlook for its value among the medical media administrators was 2.3. (See Table XII)

Common Subject Areas

Subject areas where the use of instructional media is in particular evidence were given attention by eight of ten medical schools responding to the survey. The most popular response was Nursing, listed by four schools. Two other subject areas were named by more than one medical school; they were Surgery and Anatomy. (See Table XIII)

TABLE X

QUESTION #12

"WOULD YOUR FACULTY AND/OR STAFF FIND A VALUE IN SUCH A SYSTEM?"
(0=PROBABLY NOT, 1=MAYBE, 2=GOOD CHANCE, 3=SURELY)

MEDICAL SCHOOL	RESPONSE	NUMERICAL VALUE
Albany Medical College	Maybe	1
Columbia University College of Physicians and Surgeons	Maybe	1
Cornell University Medical College	Maybe	1
Albert Einstein College of Medicine	Surely	3
New York Medical College	Surely	3
New York University School of Medicine	Maybe	1
State University of New York Downstate Medical Center	Maybe	1
State University of New York at Buffalo School of Health Sciences	Good chance	2
State University of New York Upstate Medical Center College of Medicine	Surely	3
University of Rochester School of Medicine	Good chance	2
AVERAGE		1.8

TABLE XI

QUESTION #13

"WOULD YOUR FACULTY AND/OR STAFF FIND VALUE IN MEDIA MATERIALS AVAILABLE FROM OTHER MEDICAL SCHOOLS IN NEW YORK STATE AT THE COST OF DUPLICATION?"

MEDICAL SCHOOL	RESPONSE	NUMERICAL VALUE
Albany Medical College	Good chance	2
Columbia University College of Physicians and Surgeons	Maybe	1
Cornell University Medical College	Maybe	1
Albert Einstein College of Medicine	Maybe	1
New York Medical College	Good chance	2
New York University School of Medicine	Probably not	0
State University of New York Downstate Medical Center	Good chance	2
State University of New York at Buffalo School of Health Sciences	Good chance	2
State University of New York Upstate Medical Center College of Medicine	Surely	3
University of Rochester School of Medicine	Surely	3
AVERAGE		1.7

TABLE XII

QUESTION #14

"WOULD IT BE VALUABLE FOR ALL CONCERNED AT YOUR INSTITUTION TO HAVE AVAILABLE A CATALOG OF PROGRAMS OWNED (PRODUCED AND PURCHASED) BY OTHER MEDICAL TEACHING INSTITUTIONS IN NEW YORK STATE?"
(PROBABLY NOT, MAYBE, GOOD CHANCE, SURELY)

MEDICAL SCHOOL	RESPONSE	NUMERICAL VALUE
Albany Medical College	Surely	3
Columbia University College of Physicians and Surgeons	Good chance	2
Cornell University Medical College	Maybe	1
Albert Einstein College of Medicine	Surely	3
New York Medical College	Maybe	1
New York University School of Medicine	Good chance	2
State University of New York Downstate Medical Center	Surely	3
State University of New York at Buffalo School of Health Sciences	Good chance	2
State University of New York Upstate Medical Center College of Medicine	Surely	3
University of Rochester School of Medicine	Surely	3
AVERAGE		2.3

TABLE XIII

QUESTION #15

"PLEASE INDICATE ANY AREAS OF INSTRUCTION WHERE THE USE OF INSTRUCTIONAL MEDIA IS PARTICULARLY EVIDENT"

MEDICAL SCHOOL	AREAS OF INSTRUCTION
Albany Medical College	Surgery, Psychiatry Physicians' Assistants, Primary Care Nurses
Columbia University College of Physicians and Surgeons	Training
Cornell University Medical College	Nursing
Albert Einstein College of Medicine	Continuing Education
New York Medical College	
New York University School of Medicine	1st and 2nd Years of Medical School
State University of New York Downstate Medical Center	No response
State University of New York at Buffalo School of Health Sciences	Physiology, Anatomy, Histology, Microbiology, Bio-Chemistry, Pharmacology, Social & Preventative Medicine
State University of New York Upstate Medical Center College of Medicine	Anatomy, Surgery, Medicine, Neurology, In-service Nursing, Pathology
University of Rochester School of Medicine	All areas, especially Nursing

CHAPTER FIVE

SUMMARY
AND
CONCLUSIONS

CHAPTER V

SUMMARY AND CONCLUSIONS

The use of instructional media in medical schools in New York State must be regarded as an educational method subject to the dictates of the personal choices of the users. The results of the survey for this study clearly show that among ten medical schools in New York State, no two responded in a manner which would indicate identical information and opinions concerning the same issues. This is true even though the schools are dealing with the same subject matter. It is easy to understand, given these philosophic differences between medical schools, that one school may or may not find value in a mediated program developed by another school. Such programs may tend to be highly subjective in terms of faculty input.

According to the survey respondents, overall faculty use of instructional media is high in medical schools in New York State. Only Cornell University Medical College did not even hazard a guess, opting to write "don't know" in the space provided. The statewide average of 68% of faculty using some type of instructional media is most encouraging. This figure sets the tone for discussions in favor of a statewide sharing system for instructional media. After all, among that number

of faculty, it is assumed there must be considerable agreement in educational substance and style.

Another area worth examining are the numbers of programs produced by individual medical schools in each of eight types of software.[1] It was assumed that if a difference in production interests or capabilities could be determined between the schools, then these conditions would be cited as positive ground for the formation of a system for sharing mediated programs. For instance, if one school's media center is geared up to produce motion picture film and another's is similarly ready to produce videotape, this imbalance creates a vacuum which may be filled through sharing materials.

The results of the survey showed a general popularity in production of videotape, still photographs and 35mm slides. Of nine medical schools responding to the question, all of them indicated that some in each of the above software categories were produced on an annual basis. It is not certain how many of each, because Cornell University Medical College answered with a blanket "Don't Know" for all production categories, New York University School of Medicine answered each category in percentages, and Columbia University College of Physicians and Surgeons answered with either a blank or a check mark for each category regarding instructional media use. The imbalance in production

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[1]Posters, Still Photographs, Models, Motion Picture Film, Videotape, Audiotape, 35mm Slides, and Transparencies.

checked out well in the survey. One example of this is found in the differences in media production between New York Medical College and the University of Rochester School of Medicine. In a year's time, the New York Medical College produces no audiotapes and 500 35mm slides. In the same time, the University of Rochester School of Medicine produces 100 audiotapes and 100 35mm slides. With this difference in production between the two medical schools in these two software categories, one or both of two possibilities must be true. Either the schools are more interested in one medium over another as a means to meet their educational goals, or they are equipped to produce one medium, and not the other. Either way, access to media materials produced by other schools would provide avenues of experimentation and opportunities for evaluation of how given media might improve or reinforce current and future educational programs.

In terms of materials which are purchased by medical schools from commercial media producers, it is conceivable that two schools may have allocated funds for the purchase of programs in two different subject areas. For instance, one medical school's media librarian may find an excess of programs dealing with podiatry, while a media librarian at another school finds an excess of programs on urology. This imbalance, as in the production area, may be levelled in part through sharing such programs with other medical schools.

The survey supported this assumption, although the

return of these data for this part of the questionnaire was the sparsest of all the questions. Perhaps the most significant point reflected by the survey results in the area of purchased media materials, was that the most common answer was "0." That medical schools in New York State are not turning to the commercial marketplace for their media programming needs supports two theories. The first theory is that the available commercially produced media software does not meet their educational needs. The second theory is that these medical schools find it more cost-effective to produce their own media programs, even if they are available on the commercial market. At the present, however, each medical school is working as an individual unit, seeking to buy and/or produce programs for their own use. With the advent of a statewide media consortium for medical schools, commercial buying power could be made more effective through the employment of mass purchases where desirable, and a planned sharing schedule of chosen items.

The survey respondents' assessments of faculty desires in terms of media acquisition yielded a predictable response. On a statewide level, medical school faculty submit requests for commercially produced media materials placing motion picture film and videotape in the first and second priority positions.

Statistically, greater enthusiasm is shown by faculty for access to media programs produced by other medical schools in the state. Again, the most preferred software are videotape and motion picture film. 35mm slides and audiotape enjoy a significant popularity in their potential as produced by other medical schools. The faculty at these medical schools are presumably aware of the work their colleagues at other institutions are doing in teaching medical students or in phases of research. Given this knowledge, it is fair to assume that medical school faculty throughout the state would be anxious to incorporate mediated programs reflecting such material into their own teaching. The data show that medical school faculty in New York State are interested in obtaining mediated programs produced by other medical schools. The reason must be that certain material is not available at their own institutions, thus the need for sharing selected media programs.

The potential for a statewide sharing system among medical schools for instructional media can in another way be measured through examination of the number of "unorganized" attempts to accomplish the same thing as an organized system. From the survey, it is gathered that when one medical school requests to borrow an instructional media material from another medical school, chances are almost two to one that the request will not be honored. The statistics show a statewide average of 1.7 on a scale of 0 to 3 for frequency of requests and .9

on the same scale for frequency of compliances of these requests. These numbers are for commercially produced materials owned by the schools. If there is a given amount of educational interest in such programs, there must be one of a number of possibilities as to why the low rate of actual lending exists. One likely possibility is the presence of poor instructional media administration within some of these medical schools. The inability to cope with a given job situation most often results in the occurrence of small inadequacies in other areas. In fact, it is clear to the author that some instructional media administrators at medical schools in New York State have difficulty dealing with forces outside their own institutional system. This is evidenced through a low accessibility by telephone, and a display of such a hurried attitude that there seemed to be a minimum of time allotted to "outsiders." Fortunately, this proved to be the exception, not the rule. Another possibility is that the programs which are requested to be borrowed are simply unavailable for that purpose. This would be the case if such a program were used by the school so often that it could not be given up for any substantial amount of time. However, unless some media administrators are inhibited by copyright laws, there is no reason why any mediated program could not be available in duplicate form.

Feasibility as Reflected by the Data

The receptivity of media administrators at medical schools in New York State to the possibility of an instructional media consortium was not overwhelming. However, positive attitudes in this direction can be called significant. On a statewide level, it was deemed by the media administrators that it would be a valuable opportunity to borrow or exchange materials produced by other medical schools in New York State at a level of 1.8 on the scale of 0 to 3. Even higher was the rating for the potential value of commercially produced materials, at 1.9 on the same scale. It is, of course, imperative for the existence of any statewide program that most of the principal administrators involved are convinced of its positive value and its workability. Accomplishing this objective is an entirely different matter than merely surveying present attitudes. However, in light of the evidence gathered, it is safe to conclude that a solid foundation exists in New York State for the formation of a medical media consortium. One of the healthiest signs is the general reaction from the media administrators to questions dealing directly with the formation of the consortium. Only four of ten administrators had knowledge of attempts to start a sharing system for instructional media, but when asked if their faculty or staff might find value in such a system, all respondents left the door open to the possibility. On the scale of 0 to 3, the statewide average for that question was 1.8, a very

encouraging statistic.

Attempting to spare the survey respondents possibly confusing details as to the author's possible plan for the structure of the consortium, two questions were nevertheless included in the questionnaire to illicit judgements in order to gauge the media administrators' reactions. Both of these questions gained a positive rating statistically. One of the questions concerned the potential value in obtaining media materials from other schools at the cost of duplication. Only one respondent out of ten chose the negative answer and the statewide average rested at 1.7 on the scale of 0 to 3. One shining star in the midst of some otherwise mediocre data was the reaction to the possible value in a catalog listing the instructional media programs owned by the medical schools in New York State. The statewide average was 2.3 on the scale of 0 to 3. There were no negative answers (the lowest choice of "Probably Not"), and there were five respondents who chose the highest answer. Such a strong response to this question indicates that the media administrators surveyed have an interest in the work that each other is doing. This is the type of basic professional interest which must exist for any cooperative effort to succeed.

The last question on the survey which asked for subject areas where the use of instructional media is particularly evident yielded an unexpected response. Four of eight schools responding to the question listed nursing as an outstanding

area of instruction where media is in use. These responses point up an important fact. Even though all of the medical schools surveyed offer the first four basic years of medical education, beyond this they may offer any number of a variety of graduate specialty programs, medical technician programs, or, as surfaced on the survey, nursing programs. For the students in similar programs around the state, which are the bulk of the student population at these schools, the educational objectives are likewise similar, showing a clear case for the value of instructional media materials in use by other schools.

The Original Outlook vs the Survey Results

In the author's interview with Anne Lawrence, Media Librarian at the Upstate Medical Center in Syracuse, it was expressed by Ms. Lawrence that the communication level between media administrators at medical schools in New York State is not conducive to organized professional relationships. For example, there are no formal meetings or all-inclusive correspondence between medical media administrators in New York State. However, the survey results show that a significant number of these individuals share the same attitudes toward the organization of a statewide consortium for instructional media in medical education. Certainly, a project of this potential is worth a day's exploration by a group with common general objectives. Medical media administration personalities might play a major role in any attempts

to organize a statewide media consortium. This is true in both positive and negative ways. The author's judgements on this matter can only come from experience resulting from contact concerning this thesis. Overall, the results predicted by Ms. Lawrence stand very well with the survey results. She felt, prior to the survey, that some medical school media administrators would be easy to deal with and responsive, some would be enthusiastic and show a willingness to experiment, and others would be negative in these respects. The survey results, then, turned out to be a general confirmation of the original hypothesis.

The Media Consortium

The purpose and structure of a medical media consortium in New York State would ideally be designed by the participants to accommodate their own needs as they perceive them. Hypothetically, such a medical media consortium might be set up in the following manner.

The primary function of a medical media consortium would be to coordinate the circulation of media materials between the participating medical schools. As other functions, the administrators of the consortium could act as representatives to commercial media houses. As a collective, members of the consortium could increase their buying power of multiple software programs or sets of programs.

In addition to acting as a medical media clearing house, the administrative portion of the consortium could provide a listing of programs available for use within the ownership of the members. This would require constant communication with the membership to gather information and issue periodic supplements to the list.

A further endeavor for the consortium might be to provide an evaluation service for the members. Medical and media experts could submit their evaluations of programs being considered for purchase, or those produced by medical schools in New York State. These evaluations would be used by members of the consortium in determining if given programs are suited to their needs.

Funding for a medical media consortium in New York State may be available from one or more sources. One possibility is an allocation from the state budget education expenditure. This, however, could lead to restrictive circumstances as dictated by state government. Rarely is money handed out from government sources without attached "guidelines." Another consideration for funding the consortium would be the medical schools themselves. The member medical schools could split the fiscal responsibility in an appropriate manner.

Facilities and staffing for the consortium headquarters would be, of course, arranged according to the activities and scope of the organization. Given that half of the medical

schools in the state are in the New York City area, it may be advantageous to locate the consortium headquarters there.

A medical media consortium in the experimental stage might limit its involvement to one type of software. For instance, if the consortium activities were at first concerned only with videotape (something which all medical schools surveyed use), a good indication of the strong and weak points of the organization could be determined. Once the designated trial period has ended, decisions can be made on possible expansion of consortium services, or reorganization in appropriate directions.

NEED FOR FURTHER STUDY

A further direction of study should involve gathering data from medical school faculty in New York State. Questions to be answered by this study would involve preference and usage levels of instructional media by those faculty, and attitudes regarding the potential of a media software sharing program between medical schools in New York State. The data from this study would be valuable in its depiction of the users of mediated programs in medical education. Certainly these faculty, as decision-makers in the process of media materials acquisitions, should be most qualified to assess the usefulness of such programs in their teaching, and the value of access to other collections of media materials.

APPENDIX A

Questionaire for New York State Medical Schools

QUESTIONNAIRE FOR NEW YORK STATE MEDICAL SCHOOL MEDIA CENTERS

1. How many faculty members at your school use any kind of instructional media in their teaching?

____ 80-100%
____ 60- 80%
____ 40- 60%
____ 20- 40%
____ 0- 20%

2. On an annual basis, approximately how many instructional materials are produced in-house utilizing the following types of software?

____ posters, flip charts, bulletin boards
____ still photographs
____ scale models, replicas
____ motion picture film, film loops (8 or 16mm)
____ videotape
____ audiotape
____ 35mm slides (used with live or recorded narration)
____ transparencies for overhead projection

3. On an annual basis, approximately how many instructional materials are purchased in the form of the following types of software?

____ posters
____ still photos
____ scale models
____ motion picture film
____ videotape
____ audiotape
____ 35mm slides
____ transparencies

4. Faculty members submit requests for commercially pre-produced materials you do not own for the following types of software:

	never	seldom	sometimes	often
posters, etc.	____	____	____	____
still photographs	____	____	____	____
motion picture film	____	____	____	____
videotape	____	____	____	____
audiotape	____	____	____	____
scale models	____	____	____	____
35mm slides	____	____	____	____
transparencies	____	____	____	____

5. Faculty members would find value in access to programs which are produced and/or owned by other medical schools in New York State in the form of the following types of software:

	probably not	maybe	good chance	surely
posters, etc.	____	____	____	____
still photographs	____	____	____	____
motion picture film	____	____	____	____
videotape	____	____	____	____
audiotape	____	____	____	____
scale models	____	____	____	____
35mm slides	____	____	____	____
transparencies	____	____	____	____

6. You receive requests from other medical schools in New York State for commercially produced media materials your institution owns:

____ often
____ sometimes
____ seldom
____ never

7. You have lent commercially produced materials your institution owns to other medical schools in New York State:

____ often
____ sometimes
____ seldom
____ never

8. You have lent materials your institution has produced to other medical schools in New York State:

____ often
____ sometimes
____ seldom
____ never

9. You would find it a valuable opportunity to borrow or exchange materials produced by other medical schools in New York State:

____ often
____ sometimes
____ seldom
____ never

10. You would find it a valuable opportunity to borrow or exchange commercially produced programs owned by other medical schools in New York State:

____ often
____ sometimes
____ seldom
____ never

11. Do you know of any attempts to implement a sharing system for instructional media materials between two or more medical schools in New York State?

12. Would your faculty and/or staff find value in such a system?

____ probably not
____ maybe
____ good chance
____ surely

13. Would your faculty and/or staff find value in media materials available from other medical schools in New York State at the cost of duplication?

____ probably not
____ maybe
____ good chance
____ surely

14. Would it be valuable for all concerned at your institution to have available a catalog of programs owned (produced and purchased) by other medical teaching institutions in New York State?

____ probably not
____ maybe
____ good chance
____ surely

15. Please indicate any areas of instruction where the use of instructional media is particularly evident:

Additional comments on any questions are welcome on these or attached papers. Thank you.

APPENDIX B

Summary Sent to Survey Participants

ITHACA COLLEGE

Ithaca, New York 14850

TELEPHONE (607) 274-3214

SCHOOL OF COMMUNICATIONS

October 14, 1977

Dear Survey Respondent:

All ten of the surveys from medical schools in New York State have been returned.

As promised, I am enclosing a cooy of the compiled results exactly as submitted by each school, without interpretation.

Once again, thankyou for your cooperation in the survey effort.

Sincerely,

Jeffrey S. Halik

Jeffrey S. Halik

Medical schools surveyed are designated in these pages by the following:

1 - Cornell University Medical College
2 - New York Medical College Flower and Fifth Avenue Hospital
3 - New York University School of Medicine
4 - SUNY Downstate Medical Center
5 - Albany Medical College of Union University
6 - SUNY Buffalo School of Health Sciences
7 - Albert Einstein College of Medicine of Yeshiva University
8 - Columbia University College of Physicians and Surgeons
9 - University of Rochester School of Medicine and Dentistry
10 - SUNY Upstate Medical Center College of Medicine

1. How many faculty members at your school use any kind of instructional media in their teaching?

1 - don't know
2 - 40-60%
3 - 80-100%
4 - 80-100%
5 - 80-100%
6 - 20-40%
7 - 80-100%
8 - 20-40%
9 - 60-80%
10 - 80-100%

2. On an annual basis, approximately how many instructional materials are produced in-house utilizing the following types of software?

	1	2	3	4	5	6	7	8	9	10
posters	ΣOD	30	5%	200	250	65	4,000		4	200
still photos	ΣOS	1600	10%	5,000	15,000	5,750	25,000		4	11,000
models	ΣT	0	0	?	0	0	3		3	5
motion film		0	0	20	3	0	10		4	12
videotape		25	10%	40	200	50	200	✓	50	50
audiotape		0	0	250	300	800	100	✓	100	500
35mm slides		500	75%	?	15,000	15,900	90,000	✓	100	500
transparencies	↓	0	0	1,000+	200	150	500	✓	20	1000

3. On an annual basis, approximately how many instructional materials are purchased in the form of the following types of software?

	1	2	3	4	5	6	7	8	9	10
posters	DON'T KNOW	100	0	?		0	10		0	0
still photos		3,000	0	?		0	0		0	0
models		0	0	?		0	0		2	6
motion film		0	0	300		5	5		15	10
videotape		50	0	100		10	10	✓	5	50
audiotape		0	0	?		25	50	✓	10	0
35mm slides		200	0	1000's		100	500		5	450
transparencies	↓	0	0	?		25	0		1	0

4. Faculty members submit requests for commercially pre-produced materials you do not own for the following types of software...

	1	2	3	4	5	6	7	8	9	10
posters	NEVER	NEVER	NEVER	NEVER	NEVER	SELDOM	SELDOM	NEVER	NEVER	NEVER
still photos	NEVER	SELDOM	NEVER	OFTEN		SELDOM		NEVER	NEVER	NEVER
models	NEVER	SOMET	NEVER	NEVER		SELDOM		NEVER	SOMET	NEVER
motion film	OFTEN	SELDOM	SELDOM	OFTEN		OFTEN		SOMET	OFTEN!	OFTEN
videotape	SELDOM	SELDOM	SELDOM	OFTEN		SOMET		OFTEN	OFTEN	SOMET
audiotape	NEVER	SOMET	NEVER	OFTEN		SOMET		OFTEN	OFTEN	NEVER
35mm slides	NEVER	NEVER	NEVER	OFTEN		OFTEN		SOMET	OFTEN	SOMET
transparencies	NEVER	SOMET	NEVER	SOMET	↓	SOMET	↓	SOMET	SOMET	SOMET

SCALE: Never, Seldom, Sometimes (SOMET), Often

5. Faculty members would find value in access to programs which are produced and/or owned by other medical schools in New York State in the form of the following types of software:

	1	2	3	4	5	6	7	8	9	10
posters	MAYBE	PN	PN	MAYBE	PN	PN	MAYBE	PN	PN	PN
still photos		SURELY	PN	GC	MAYBE	MAYBE		MAYBE	PN	PN
models	MAYBE	MAYBE	PN	GC	PN	MAYBE		PN	GC	PN
motion film	GC	GC	MAYBE	SURELY	GC	GC		GC	SURELY	SURELY
videotape	GC	SURELY	MAYBE	SURELY	SURELY	GC		SURELY	SURELY	SURELY
audiotape	MAYBE	MAYBE	PN	SURELY	GC	GC		MAYBE	SURELY	GC
35mm slides	MAYBE	MAYBE	MAYBE	SURELY	MAYBE	SURELY		GC	SURELY	GC
transparencies	MAYBE	PN	PN	GC	MAYBE	MAYBE	↓	GC	GC	MAYBE

SCALE: Probably Not (PN), Maybe, Good Chance (GC), Surely

6. You receive requests from other medical schools in New York State for commercially produced media materials your institution owns:

(SCALE: Never, Seldom, Sometimes, Often)

1 - Never
2 - Sometimes
3 - Sometimes
4 - Sometimes
5 - Seldom
6 - Often
7 - Seldom
8 - Sometimes
9 - Sometimes
10 - Sometimes

7. You have lent commercially produced materials your institution owns to other medical schools in New York State:

(SCALE: Never, Seldom, Sometimes, Often)

1 - Never
2 - Seldom
3 - Never
4 - Never
5 -
6 - Often
7 - Sometimes
8 - Never
9 - Never
10 - Sometimes

8. You have lent materials your institution has produced to other medical schools in New York State:

(SCALE: Never, Seldom, Sometimes, Often)

1 - Never
2 - Seldom
3 - Never
4 - Often
5 - Never
6 - Sometimes
7 - Seldom
8 - Never
9 - Seldom

10 - Often

9. You would find it a valuable opportunity to borrow or exchange materials produced by other medical schools in New York State:

(SCALE: Never, Seldom, Sometimes, Often)

1 - Sometimes
2 - Seldom
3 - Sometimes
4 - Sometimes
5 - Seldom
6 - Sometimes
7 - Seldom
8 - Sometimes
9 - Sometimes
10 - Often

10. You would find it a valuable opportunity to borrow or exchange commercially produced programs owned by other medical schools in New York State:

(SCALE: Never, Seldom, Sometimes, Often)

1 - Sometimes
2 - Seldom
3 - Sometimes
4 - Sometimes
5 - Sometimes
6 - Sometimes
7 - Seldom
8 - Sometimes
9 - Sometimes
10 - Often

11. Do you know of any attempts to implement a sharing system for instructional media materials between two or more medical schools in New York State?

1 - No
2 - Yes
3 - No
4 - Yes
5 - No
6 - Yes
7 - Yes
8 - No
9 - No
10 - No

12. Would your faculty and/or staff find a value in such a system?
(SCALE: Probably Not, Maybe, Good Chance, Surely)

1 - Maybe
2 - Surely
3 - Maybe
4 - Maybe
5 - Maybe
6 - Good Chance
7 - Surely
8 - Maybe
9 - Good Chance
10 - Surely

13. Would your faculty and/or staff find value in media materials available from other medical schools in New York State at the cost of duplication?

1 - Maybe
2 - Good Chance
3 - Probably Not
4 - Good Chance
5 - Good Chance
6 - Good Chance
7 - Maybe
8 - Maybe
9 - Surely
10 - Surely

14. Would it be valuable for all concerned at your institution to have available a catalog of programs owned (produced and purchased) by other medical teaching institutions in New York State?
(SCALE: Probably Not, Maybe, Good Chance, Surely)

1 - Maybe
2 - Maybe
3 - Good Chance
4 - Surely
5 - Surely
6 - Good Chance
7 - Surely
8 - Good Chance
9 - Surely
10 - Surely

15. Please indicate any areas of instruction where the use of instructional media is particularly evident:

1 - Nursing

2 -

3 - Medical School 1st & 2nd Yrs

4 -

5 - Surgery, Psychiatry, Physicians' Assistants, Primary Care Nurses

6 - Phisiology, Anatomy, Histology, Microbiology, Biochemistry, Pharmacology, Social & Preventative Medicine

7 - Continuing Education

8 - Training

9 - All Areas, especially Nursing

10 - Anatomy, Surgery, Medicine, Neurology, In-Service Nursing, Pathology

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