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ABSTRACT

An outline of an instructional media project for grades Kindergarten through 12 is presented. The author describes the major steps involved in the program by which educational television (ETV) productions and 16mm films were transferred to videotape cassettes so that they could be used more easily to enrich curriculum and to support library and ETV services. Included in the outline are a listing of the general educational specifications for instructional media, an overview of a conceptual approach to an integrated information system for school systems, and a series of questions and answers relating to the use of instructional media in the schools. (LB)

GRANITE SCHOOL DISTRICT

CASE PRESENTATION

VISCA '73

by

Donald C. Hess

I. GENERAL EDUCATIONAL SPECIFICATIONS FOR INSTRUCTIONAL MEDIA

A. Educational Accountability

1. Student output is the primary criterion for effective media.
2. What should the media do beyond "entertaining" and informing, as far as students are concerned?
3. Specific responses to attain specific skills.
4. The student as a producer--not just an absorber of information.

II. A CONCEPTUAL APPROACH TO AN INTEGRATED INFORMATION SYSTEM FOR PUBLIC SCHOOLS

A. Selection and Appointment of a Technological Design Group.

1. The Technological Design Group: Educational Engineering.
2. Performance Specifications for an Electronic Instructional Support System in the Granite School District as designed by the Superintendent of Schools, Dr. T. H. Bell.
   a. The system must be cost effective.
   b. The system must be educationally sound.
   c. Classroom or classroom sub-groups should have available direct program support.
   d. Program request and reception shall be performed in each

designated classroom and be communicated electronically.

e. Multi-program capability concurrent within each school shall be provided.

f. Color as well as black and white television images shall be delivered in the system.

g. The system shall be modifiable.

h. Responsiveness of the system to teacher requests shall be immediate with well defined programming for delays in transmission and reception of programming caused by excessive requests.

i. Both classroom speakers and headphones shall be available for delivery of audio programs.

3. Project Sequence

a. The project development shall proceed through three phases:

(1) The design and implementation of a desirable information system within each school.

(2) The design and implementation of desirable information communication between schools.

(3) The design and implementation of a complete information system for the total school district (regional).

4. Systems Requirements

A set of requirements have been established to facilitate the use of our technological design groups planning model in the project development.

These requirements include the specifications already listed and also provide technical requirements which must be considered concurrently with educational requirements and specifications.

Whenever any systems component is under consideration, it must meet the systems requirements to be acceptable. These are:

a. compatability

b. functionality

c. economy - cost effectiveness

d. technology

e. in-service and pre-service training

f. evaluation

5. Meeting the Needs of the Potential Users

QUESTION: a. Who are our users?

ANSWER: Students - Kindergarten through grade twelve.

QUESTION: b. What are the users needs?

ANSWER: Specific curriculum enrichment, extension and support services from our current film library and educational television programming.

(1) The "right-to-reproduce" or "transfer" from 16mm. film format to 3/4" Sony-U-Matic Videocassettes must be obtained from each film producer.

(2) Description of contract types.

(3) What is equitable to the film producer and user. The rationale for a more intimate contracting communication between the user and producer.

6. The Rationale for Using Videocassettes in Place of 16mm. or 8mm. Films

ANSWERS:

a. longer "running" life of tapes

b. less "down-time" on electronic equipment

c. ease of operation of electronic equipment as compared with 16mm. motion picture projectors; anyone can use videocassettes!

d. ease of access with differing programming sources on videocassettes

e. creative uses of videocassette equipment:

(1) Development of the teacher's own creations utilizing different non-print formats on the same videocassette tape; we refer to these as concept reinforcement tools.

(2) Students can use the videocassette equipment to make their own project productions; this develops the student's creative talents. Students have become quite proficient in operating television cameras and the associated peripheral equipment.

QUESTION: 7. Why and How is the Decision to Use Videocassettes Made?

ANSWERS:

a. The teacher is the "key" interpreter" of the learning style of each student; therefore, the teacher decides which basic learning and enrichment software formats will be used.

b. Our teachers have let us know that the motion picture medium is the most effective medium, but until the videocassette information delivery system was installed--they were blocked from having adequate access to the motion picture medium.

c. Teaching staffs have insisted that they need a "flexible use" tool--especially as regards the motion picture medium.

(1) Avoidance of film items that become obsolete quite rapidly; curriculum change in this age is rapid and constant!

(2) Use of a major information carrier that could be used, erased and re-programmed (such as the videocassette tape).

(3) Non-print items other than 16mm. films can very readily be used on the videocassette medium:

sound filmstrips

filmstrips (no audio)

slides

audio (especially for foreign language instruction)

QUESTION: 8. What Equipment Is Used?

ANSWER: a. The Granite School District uses the Sony-U-Matic 3/4" Videocassette System.

Some suggested improvements on the equipment:

(1) a "stop-frame" device

(2) an improved tape-tension control device and improvement on the tape-threading device to eliminate tape tangling.

9. Investment and Operational Expenses

a. Our basic entry utilized a combination of Federal Title III, N. D. E. A. and matching funds from our capital outlay budget. With 186 videocassette playback and recorder units and color T. V. sets in the 23 pilot project schools--our total investment was $404,732.80.

b. In addition, we have managed through the "bidding" process to obtain 30 minute length videocassette tapes (blank) for an average cost of $11.65 per tape. Our district just recently purchased 8,000 of these 30 minute length tapes for the above quoted price.

c. In following the cost-effectiveness guidelines as set up by our Superintendent of Schools, we did not have to hire any additional personnel. The equipment warranty covered our servicing needs for our first years operation which we have just completed.

The equipment dealer that sold us the Sony-U-Matic system was not very dependable; his "servicing" work was very slow. Initially, our equipment contract stated that the equipment dealer was to supply each

school with a "loaner" piece of equipment until he could get our equipment repaired--but this dealer absolutely failed to live up to this part of the contracted agreement. Fortunately, our records of operation show that we had very little "down-time" (thanks to the reliability and quality control at the factory).

QUESTION: 10. Who participated In The Production of Software?

ANSWER:

a. No new software was produced to be used with this system in our school district. We utilized four main sources of programming:

(1) program dubbing from educational television channels

(2) the dubbing of 16mm. films onto the videocassette format which I have secured copyright "easement" for from several companies--of which EBEC Films and Coronet Films have taken the leadership.

(3) the dubbing of many 16mm. films which are in the "public domain" and require no copyright easement

(4) the dubbing of 16mm. films from some film producers who have given us the "right-to-reproduce" their prints as a part of the purchase agreement--at no extra cost and for the life of the print.

11. What are Software Costs for the Videocassette Program?

As of this writing, we now have 1,500 master video-tapes for our videocassette program. Cost of the tape and dubbing has averaged $27.68

per master tape (per 30 minute tape). We are utilizing one multiple-copy dubber which produces 8 copies on one run; this has been adequate to keep up with requests for the present size of the program. As we expand into additional schools, we will also add additional stages to our dubbing equipment--so that we can keep up with the program demands.

We have been able to get more than 500 "runs" from some of our most frequently used videocassettes; most 16mm. films are wearing badly at the 200 "run" mark. Average print-life for 16mm. films in our film-library operation is 2-1/2 years.

12. How is Duplication Taken Care Of?

    a. This is answered in previous sections.

13. Final Assessment

    a. I find that the greatest problem which must be solved is the contractual arrangement between film producer and user. Viable contractural arrangements can come about through careful and considerate communication between producer and user, as the Granite School District has demonstrated.