



## Future Trends

By  
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The lifestyle of modern society is technologically oriented. Consequently, the mention of technology immediately conjures mental pictures of industry and the influence technological advances have had on our personal lives—labor saving devices, computers, mass printing, automobiles, jet planes, rockets to the moon, telephones, motion pictures, television, and so forth. Technology is rarely considered by the layman, or even the classroom teacher, as having a major role in the educative process. Yet nothing could be further from the truth.

In fact, the invention of movable type five centuries ago, which permitted duplication of writings in printed form, was the first major technological contribution made to the educative process. It made possible the greatest forward step in education the world has ever yet known. Interestingly enough, this invention could be considered as a parallel to the modern teaching machine by stating each student, being provided with an individual book, would be free to learn on his own. Who needs a teacher? The printed book would permanently replace the instructor. Each student would progress at his own rate. Of course, the opposite was true and the teacher became more important than ever before. Even in its pre-industrial state, technology has always played a role in the learning-teaching process, be it the wax tablet of ancient times or the more recent quill pen. The abacus, man's earliest computer, was known in the Mediterranean as early as 450 B.C.

Obviously, technology's major promise is the creation of change which will permit the educational system to manage learning so that it will occur more efficiently. Teachers, however, resist change either because they have not understood or because they do not want to accept alternatives to doing the talking, the performing and the showing. Slow as teachers are to accept innovation, the fact remains that over the past ten years classrooms for deaf children have changed greatly and most, if not all, are equipped with certain basic equipment such as the overhead projector, filmstrip projector, and screens. Interest and understanding has also developed to the point where teachers in many schools have access to substantial amounts of resource materials, and they are beginning to use them more extensively and wisely to significantly reduce instructional time.

This endeavor to bring machines, materials and techniques together to improve educational opportunities for deaf children has resulted in the development of a national distribution system of films and other relevant materials; the development of instructional systems such as Project LIFE; a series of annual symposia on educational technology for educators of the deaf; the development of regional media centers; the establishment of a doctoral program in Educational Technology for educators of the deaf at a major university; and the realization that teacher training centers must begin to provide pre-

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service training in the use of media. It has also resulted in greater emphasis on the need to transfer these applications to the education of all handicapped children. Consequently, the Captioned Films for the Deaf program (which was originally directed toward providing worthwhile recreation for deaf adults and children) has become, in fact, a national program of instructional technology directed toward bringing the best, the most relevant and the widest experiences possible to enhance the educational environment of handicapped learners.

The name of the game today is educational *services*. To date, the Media Services and Captioned Films Branch has been assigned the Federal government's responsibility of bringing the results of research in instructional technology directly to the handicapped child. For the future, what is being planned is the development of a Learning Resources System composed of component programs of the presently existing Special Education Instructional Materials Centers, Regional Media Centers for the Deaf, Regional Resource Centers and the National Center on Educational Media and Materials for the Handicapped. In cooperation with the States, this system is expected to provide a full spectrum of services including: (1) identification of the handicapped child, (2) diagnosis, (3) program prescription, (4) development of needed instructional materials; and (5) delivery of other appropriate support services to the learner. The purpose of this comprehensive system is to spread the responsibilities among components which vary in interest and expertise, but which interlock in such a way that this system can deliver the program as a whole. This approach is compatible with the 1980 objective of the Bureau of Education for the Handicapped: an appropriate education for all handicapped children.

At this point, let us examine the new network to be launched during Fiscal Year 1975. This is the Learning Resource Center Network, a multi-strategy approach which will converge the various efforts that have been taking place into a full complement of services that will be developed into a single system with thrust and direction to serve all handicapped children.

In cooperation with the states, the network is expected to provide a full spectrum of services which involve the following major strategies:

1. Assistance to states in their development of the intrastate capacity to meet the needs of handicapped children in the areas of educational appraisal, educational programs, and media-materials and educational technology;
2. Provision of backup services to the states in the support and development of needed resources for teaching handicapped children; and
3. Acting as the pathway between and among states to assure that all states have a window by which all available resources can be made available to all handicapped children in the nation.

There are two programmatic areas in the new network consisting of Regional Resource Centers and Area Learning Resource Centers. Their missions are different yet interlocked. Each will work with State Education Agencies; the Regional Resource Centers (RRCs) to assure effective appraisal and educational programs for all handicapped children and the Area Learning Resource Centers (ALRCs) to assure effective instructional materials service to the same population.

The conceptualization and development of the new Network is the result of past program efforts to provide full services to handicapped children. In the past only the Instructional Materials Centers (IMCs) and Regional Media Centers for the Deaf (RMCs) were able to cover the nation. The Regional Resource Centers provided only limited coverage in six areas from services within a city to services for several

states. Careful planning has established compatible boundaries in thirteen regions based on population. Consequently, there will be 13 RRCs and 13 ALRCs which will balance services to metropolitan and rural areas.

In 1964, two Instructional Media Centers and one Regional Media Center for the Deaf were funded by the Office of Education. The effectiveness of media support to handicapped children resulted in a final network of 13 IMCs and 4 RMCs, but it was evident that identification and diagnostic services were still lacking. Congress in recognition of these needs passed legislation in 1967 which led to the establishment of the Regional Resource Centers.

During this same period, the IMCs and State Education Agencies realized the need for instructional materials centers at the intermediate and local levels.

Thus, local, state and federal funds were made available to establish frontline associate instructional materials centers which were much closer in geographic proximity to the users of media and materials than were the regional IMCs.

By the end of 1967, there were 80 such centers.

In 1969, the creation of a National Center on Educational Media and Materials for the Handicapped (NCEMMH) alleviated a growing concern, for it was apparent that the media, materials, and educational technology needs of handicapped children were so great and the target population so small that a central agency was necessary to collect data regarding these needs.

By the end of 1973, services were being delivered to the handicapped by 400 Associate Instructional Materials Centers, the Regional Instructional Materials Centers and the Regional Media Centers for the Deaf and the Regional Resource Centers.

From this foundation emerged the conceptual beginnings of the LRC Network. Therefore, the proposed 1975 work activities of the Regional Resource Centers and the Area Learning Resource Centers embody the best of the earlier programs.

Before turning our attention to the ALRC program, which is the primary focus of this presentation, a brief overview of the Regional Resource Center program is in order—to complete the picture of the emerging Learning Resource Center Network.

The law and federal regulations charge the RRCs with the following work areas:

1. testing and educational evaluation to determine the special educational needs of handicapped children referred to a center in cases where such services do not exist and for those children with complicated or inexplicable educational problems;
2. development of educational programs to meet the needs of those children referred, tested, and educationally evaluated;
3. technical assistance to schools and other appropriate agencies in providing the mentioned educational services through consultation and periodic re-examination and re-evaluation of educational programs; and

4. demonstration and dissemination of new and tested methods of appraisal and instructional procedures.

While the RRCs will serve the educational appraisal and educational programming needs of handicapped children, the media, materials, and educational technology needs will be served by the Area Learning Resource Centers. The ALRCs will interlock with the existing instructional materials centers and the Regional Media Centers for the Deaf. However, there are several differences in the ALRC program. These differences will be pointed out as we go along.

Be sure to note the role of the National Center on Educational Media and Materials for the Handicapped, an ongoing federally funded program and the Capstone of the ALRC program.

The workscope of the ALRCs, authorized by the Law and the federal regulations, incorporates five major areas.

These areas are:

1. state program development;
2. instructional materials development;
3. media, materials, and educational technology training;
4. a media and materials information system; and
5. a materials distribution system.

Now let's examine these areas one by one.

### ***State Program Development***

- Activities of the ALRC will include consultation services, provision of workshops and conferences, dissemination of information, and the reinforcing of state staff in media materials and technology.
- Where assistance is needed and requested by local and state educational agencies, the ALRCs will continue to aid in the development and stimulation of associate instructional materials centers at the local, intermediate, and state levels.

### ***Instructional Materials Development***

- The development of child-use and teacher/parent-use materials will no longer be a function of individual centers, but will be the primary function of three Specialized Offices.
- These Offices, or Specialized Houses, will be given the responsibility for locating and developing new materials.
- One Office will reinforce all ALRCs in regard to media and materials for the deaf and hard of hearing learner.
- Similarly, a second Office will reinforce ALRCs with respect to materials and media for the blind and visually impaired.
- A third Office will be responsible for the mentally retarded and the other handicapping conditions.
- Through its data bank, the National Center will identify needed instructional materials and prioritize the needs.

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- Tested and developed products will be entered into the data bank of the National Center in order to answer inquiries regarding materials for handicapped learners.

### ***Media, Materials, and Educational Technology Training***

- The ALRCs will identify teacher pre- and in-service needs for training materials designed to increase competency in selecting and using materials.
- The regional centers also will locate or conceptualize needed materials.
- The development of such materials will no longer be done by individual centers. Instead, the three Specialized Offices will develop needed, but unavailable, training materials.
- The National Center will develop an information base on media-training programs.

### ***Media and Materials Information System***

- The three Specialized Offices will classify and evaluate child-use and teacher/parent-use materials for information system entries.
- The National Center will perform the function of maintaining and operating a data bank for all such materials.
- This data bank will provide answers to inquiries about materials.
- In addition, the National Center will maintain records on inventories, circulation, demand, and evaluation of materials.

### ***Materials Distribution System***

- Individual regional centers will no longer provide depository or distribution services for the program.
- Instead, the fourth Specialized Office will be the depository for materials and media and provide distribution services.
- This Office will be used by each ALRC as a backup facility for state and local materials centers where needed.
- In this manner, the ALRCs will interface between and among states to assure that all handicapped children have a pathway to all available media, materials, and educational technology.

In summary, the major differences between the ALRC program and the existing Network are:

1. the interlocking of the IMCs and RMCs into composite field units;
2. one Specialized Office serving as a central instructional media and materials depository and distribution system;
3. three Specialized Offices for development of instructional materials and media; and
4. a unified information system or data bank which will facilitate the location and acquisition of needed materials and media.

Having given you an overview of the emerging network and its projected role in providing full services to all handicapped children including the deaf through one of the specialized offices, let me expand further on efforts to provide continuing services to the deaf. The original intent of the Captioned Films for the Deaf program which is a loan service of theatrical and documentary films remains a top priority. A separate Request for Proposal (RFP) for a Captioned Films for the Deaf Distribution Center was issued at

approximately the same time as the RFP's for the Learning Resources Network. Consequently, this specific activity serving the greater deaf population will continue unabated.

The utilization of television as a means of bringing deaf persons further into the mainstream of the general population also has a top priority.

In December, 1971, Media Services and Captioned Films sponsored a National Conference on Television for the Deaf and Hearing Impaired at the University of Tennessee which brought together representatives of the broadcasting industry, the deaf community, parents of hearing impaired children, program producers, government and other interested resources. The purpose of this meeting was to seek ways and means of allowing the deaf and hearing impaired to obtain their rights to the invaluable educational, social and cultural benefits of broadcast television.

One of the demonstrations at this conference was the use of a special decoder attached to a television set which made captions visible on the screen. Only a viewer who has this decoder attached to his set can receive the captions. This is an outgrowth of a special system developed by the National Bureau of Standards for distributing time and frequency signals via television broadcast. A careful study by the National Association of Broadcasters indicated that this type of captioning was technically feasible, but that certain steps need to be taken before such captioning could become a reality. Basically these are:

1. An effective decoder must be developed.
2. A single system must be developed.
3. Extensive field tests of the entire system including receivers equipped with decoders are necessary.

Among other questions to be answered are:

1. The cost effectiveness of such a system.
2. The length of time required to caption a program.
3. The cost of captioning a program
4. The cost of equipment to broadcasters.
5. The cost of the decoder.

Over the next year through a contract with Public Broadcasting Service this system will be further refined and developed and hard data will be collected. The potential promise for opening a new dimension for the hearing impaired is great. With patience and continued efforts we feel broadcast television will eventually play its promised role in enriching the lives of deaf and hearing impaired persons.

Further to this effort to make captioned television programs available is the "Open-Caption" technique. This means programs that can be broadcast with superimposed titles that any set can receive.

Under a contractual agreement with WGBH-TV of Boston, 26 programs of "The French Chef" starring Julia Child have been completed. Master tapes of these programs are located at the Public Television Library in Bloomington, Indiana, and became available June 1, 1973, to any PBS station in the country. This program has been very popular and while not the equivalent of MISSION IMPOSSIBLE, it is a step in the right direction. A "mixed bag" of 26 additional programs have also been captioned to add variety to available programming. The important point is that while these programs are available, we need to get

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them on the air to justify our efforts in this direction. The way to do it is for you, as members of the community, to make a request of your local PBS station to program them. Our variety in captioning is an attempt to penetrate the many facets of television: education, adult entertainment and children's programs. While we in Media Services and Captioned Films try to penetrate the many kinds of broadcast television, you must see that the markets are penetrated.

Another development is an agreement with WGBH in Boston, a demonstration project, which is brief, is the start of a captioned network newscast. In January, 1973, this captioning unit originated a nationally-broadcast captioned version of President Nixon's Inaugural Address seven hours after it was delivered. The feasibility and efficiency of this technique of speedily adapting important and timely information firmly established the possibility of providing hearing impaired persons with the type of programming most often requested: daily news. A 6 p.m. national telecast is taped and captioned for rebroadcast at approximately 11 p.m., the same evening. The Eastern Educational Television Network has distributed this newscast to its affiliates so that each local station may broadcast the captioned news if it so desires. There is a strong possibility that Public Broadcasting Service will follow up by providing the program to its interested member stations all over the United States.

The Captioned Films for the Deaf program has been the seedbed for the now emerging systematic comprehensive service which is expected to benefit all handicapped children and to advance telecommunications as another viable means of bringing full services to our handicapped citizens. The changes in the system hold great promise because we have an unparalleled opportunity to bring about a combination of federal, state and local educators and industry working together for the benefit of all. And as we tool up for the new Learning Resources System and further advances in telecommunications, let us focus on the need not to rekindle, but to continue the interest of the decade past. This creation of an inclusive approach should result in quality, quantity and a better funding base as the prospective advances of technology are applied to a nationwide effort. Together we cannot lose.

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