

# Media Development Project for the Hearing Impaired: Project Update

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*The Media Department Project for the Hearing Impaired (MDPHI) is involved in the adaptation and development of instructional materials for hearing-impaired students in the areas of concept development and decision-making skills. After a comprehensive search and an extensive materials review, four products were selected for adaptation and two for development. In order to provide thorough evaluation data, all products have been sent out for teacher product review and field-testing.*

The Media Development Project for the Hearing Impaired (MDPHI) is a contractual arrangement between the Barkley Memorial Center of the University of Nebraska—Lincoln (UNL) and the Department of Education, Office of Special Education. The Symposium is but one of several functions of MDPHI.

The broad goals of the MDPHI are to adapt existing materials or develop new materials for the hearing impaired in areas where there is an identified need. Materials to be adapted or developed are identified by an extensive search and locate effort. A requirement of the contract is that all materials must be validated. Thus, all project functions are described as Search and Locate, Adaptation, Development, Evaluation, Marketing and Dissemination, Symposium, and Liaison.

Although the current contract began October 1, 1980, UNL has a long history in the application of educational technology to the needs of the hearing impaired. Historically, the University has perhaps had a longer continuous working relationship with the Bureau of Education for the Handicapped (now Office of Special Education) than any other federal contractor. Before we describe present contract activities, a brief history of this relationship might be in order.

The involvement of UNL in the development of materials for teaching hearing-impaired children began in 1964 with a feasibility study, followed by a speechreading project, which used 8mm film in real-life situations. From that activity evolved a regional media center for the deaf that functioned from 1966 to 1974. At that time, there were four regional centers. The Midwest Regional Media Center for the Deaf (MRMCD), which covered 12 states, was in Lincoln. Most of the activities were in the area of in-service training. The first symposium was held in 1965.

From 1974 to 1977 UNL contracted the Specialized Office for the Deaf and Hard of Hearing (SO-2). During this period SO-2 developed a computer-based index of instructional materials suitable for youth with hearing impairments. The Specialized Office identified 15,000 instructional products that were useful for the hearing impaired. Abstracts of these materials are still in the NICSEM computer index.

From 1977 to 1980, roles and functions were again changed, and the Barkley Center competed successfully for the Media Development Project for the Hearing Impaired (MDPHI). The basic functions as a media development project during that contract were in four areas—adaptation, development, evaluation, and conducting a national symposium.

The current contract is in response to a RFP from the Office of Special Education (OSE) to continue the same activities as before but in different topical areas. The concentration from 1977 to 1980 was in reading, but the RFP for the current period requires that we focus on concept development and decision-making skills.

Through all those different activities we maintained, except for a three-year period from 1975 to 1977, the symposium on an annual basis. It would be a complete education to review the wide assortment of topics that have been covered during this series of 14 symposia. All the papers presented in the symposia have been printed and disseminated in the *American Annals of the Deaf*. We can be very pleased with the fact that the symposia reports make up a substantial part of the total literature in the education of the deaf.

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### SEARCH AND LOCATE PROCESS

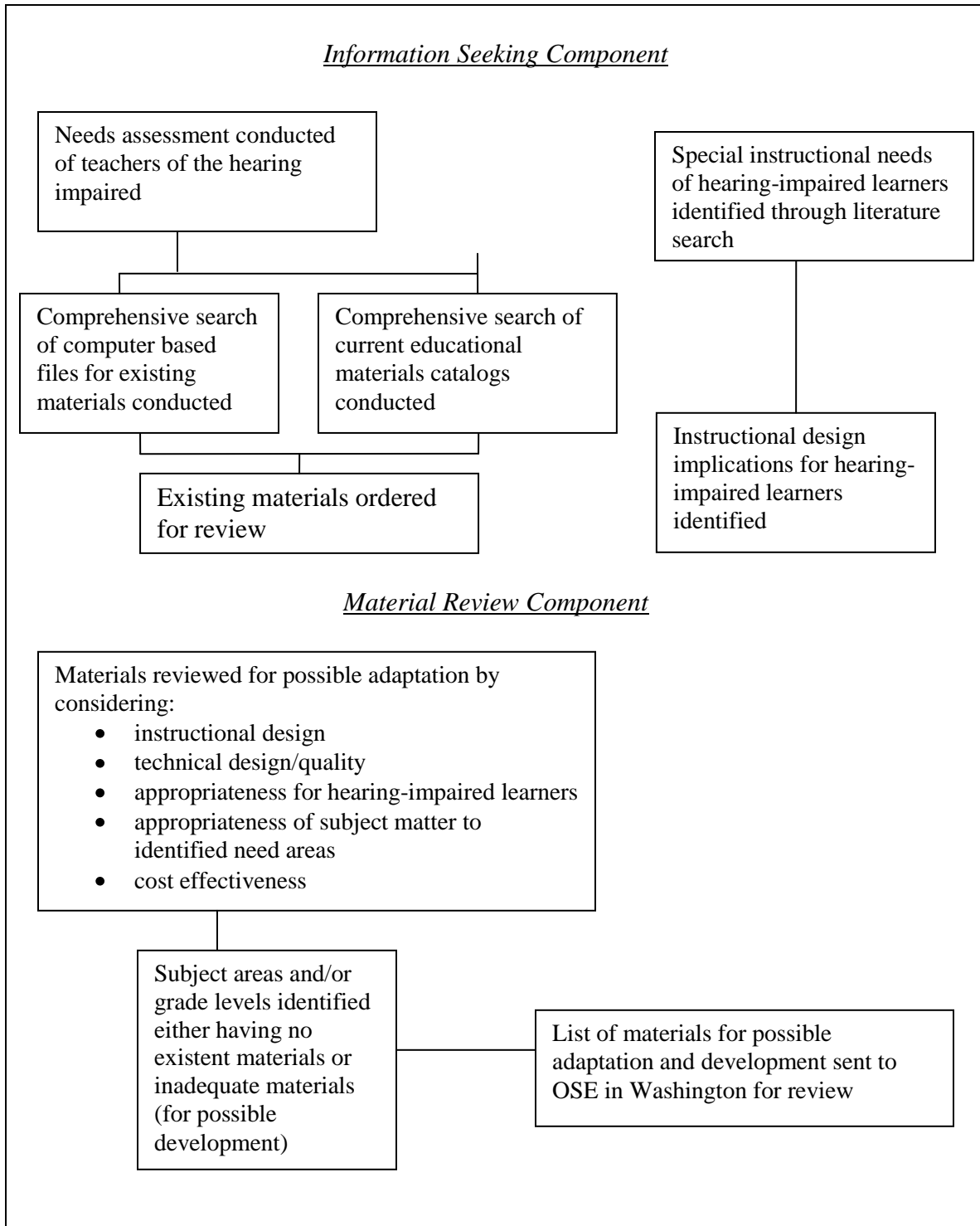
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The search and locate process is the procedure we used to select a list of materials to modify or develop. This process involved both general information seeking and specific material review components. In the information seeking activities, which are labeled as Stage I in Figure 1, specific content categories where materials seemed particularly needed for hearing-impaired learners were identified within the broad areas of concept development and decision making. This was done by using information obtained from national surveys of over 100 teachers of the deaf; from extensive literature reviews of over 70 articles and books relevant to both the general areas of memory, information processing, and decision making and the specific topic of concept development within the deaf learner; and from comprehensive material searches of current educational catalogs and of several files within the Lockheed Dialog Information Retrieval System. Specifically, over 450 abstracts were reviewed to identify materials that might be suitable for adaptation for deaf students. The information gathered from these various sources was also used to help determine important considerations for material design and adaptation.

A rather extensive material review process was initiated following the information seeking phase. This review component is referred to in the flowchart as Stage II. The materials that have been recommended by the MDPHI staff for adaptation for hearing-impaired students were selected because they “passed” this review and satisfied certain important criteria. First, all materials dealt with subject matters within concept development and decision making that were identified as *high need* areas by teachers in our needs assessment survey. Secondly, the recommended materials *did not overlap* with other instructional products currently available for hearing-impaired learners. Finally, the design/quality of all recommended materials was judged to be quite good, the general instructional approaches and forms employed were considered to be appropriate for hearing-impaired students, and the required modifications were assessed to be cost-effective.

Product development areas were also identified. In all cases, these development ideas define areas where a high need was identified but where either no materials existed to

cover this need or where materials did exist to cover this need or where materials did exist that were impossible to adequately modify for use with the hearing impaired.



**Figure 1. Search and Locate**

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## DESIGN AND PRODUCTION

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For the 1980-81 contract years MDPHI is adapting four media products and developing two packages to meet identified needs in the areas of concept development and decision-making. An overview of these six projects follows.

### **MDPHI Materials Adaptation and Development 1980-81**

#### *ADAPTATIONS*

##### Sensitivity Cards

Forty-six (46) situation cards  
Junior and Senior High  
Published by Developmental Learning Materials

##### Usable Law Program

Filmstrips and study guides  
Senior High  
Published by BFA Educational Media

##### Comparison Shopping Package

Filmstrips and print materials  
Senior High  
Published by Unigraph

##### Teaching Children Good Manners and Behavior

filmstrips and teacher's guide  
Intermediate  
Published by Educational Activities, Inc.

#### *DEVELOPMENTS*

##### Causality Package

Transparencies, activity book, and teacher's guide  
Intermediate

##### Decision Making: Voting

Videotape, filmstrips, and activity packet  
Senior High

*Sensitivity Card Package.* The *Sensitivity Card* package, produced by Developmental Learning Materials Corporation, is designed for use with junior and senior high students. It consists of forty-six 9 x 12 situation cards with full color illustrations. This set of materials provides opportunities for developing independent thinking, social values, and decision-making skills. Each card illustrates and briefly states a problem common to most secondary youth.

In order to make this material appropriate for hearing-impaired students, it was necessary to change the language structure on all but two of the cards. As originally written, the situations were stated in complex language structures, known to be difficult for hearing-impaired students. Some vocabulary changes were also necessary.

The color illustrations utilize an effective cartoon style, which is not likely to become dated. They depict each situation well and in many instances add a touch of humor. It is felt that students will readily identify with the situation as written and illustrated.

Among the advantages of the *Sensitivity Cards* is their flexibility of use in the classroom:

1. They may be shown to a group of students to initiate discussion and explore various solutions.
2. Students may select individual cards and write responses to the situation.
3. A small group of students may select a card and role play the situation.

Students are encouraged to write, state, or dramatize situations of their own. In this way, problems unique to a given class or group can be discussed.

A pilot field study was conducted in spring 1981 with the full-fledged field test scheduled for fall. Both students and teachers will be involved in evaluating the material's effectiveness.

*Comparison Shopping Package.* *Comparison Shopping* is a learning activity package consisting of a teacher's guide, duplicator booklet, and a filmstrip. It explains the difference between planned and impulse buying and outlines the who, what, where, and when of comparison shopping. The five-section booklet, presenting vocabulary, activities, and check tests, is composed of spirit masters, which can be duplicated for student use. Students can be given the entire booklet, a complete section, or single pages. The filmstrip can be used as an overview or can provide a summary or reinforcement for previously studied material. The organization of the package promotes flexible utilization, and the program can be used as an entire class project or for individual study.

Adaptations by MDPHI staff include captioning the filmstrip and modifying the print materials to emphasize activities appropriate for hearing-impaired learners. Field testing with senior high hearing-impaired students is scheduled for spring 1982.

*Usable Law Program.* The *Usable Law* program is a multimedia kit consisting of color filmstrips, student study books, and a teacher's guide. Presenting legal considerations critical to daily living, the 80-frame filmstrips discuss juvenile law, consumer law, and search and arrest law. The student study books, each approximately 25 pages in length, expand the information provided in the filmstrip, and the teacher's guide details learning strategies for utilizing the materials.

This package was selected for adaptation because of its relevance to the information needs of high school hearing audiences. In order to facilitate utilization by deaf students

and their teachers, the filmstrips were captioned, and the language structure in the student booklets was simplified. The package was organized for both classroom use and individual study.

Both teachers and students will be involved in the evaluation of this package. Teachers will provide input as to the appropriateness of the vocabulary and reading level of the filmstrip captions and student workbooks. Student evaluation is scheduled for spring 1982.

*Teaching Children Good Manners and Behavior Package.* *Teaching Children Good Manners and Behavior* is a filmstrip package presenting short, open-ended stories intended to encourage intermediate students' thinking and discussion. Eight filmstrips have been adapted, some presenting such topics as cafeteria etiquette, littering, and library rules. Others depict social situations dealing with problems of interpersonal relations. Because the story situations are open-ended, students can use problem-solving techniques in developing concepts concerning proper behavior and social relationships.

Adaptations include captioning the filmstrip and preparing a new audio cassette incorporating language changes. The teacher's guide was also revised to include activities appropriate to hearing-impaired audiences.

Field testing with students is scheduled for spring 1982. In addition, teacher input has been used to guide modifications of the teacher's guide.

*Causality Package.* The *Causality* package was developed because studies have shown that even high school students have difficulty with the vocabulary and syntax needed to comprehend and express cause and effect. The materials are designed to be used with intermediate-level hearing-impaired students, and the goal of the package is to aid students in comprehending and expressing the concept and language of cause and effect using the conjunctions "so" and "because."

The package is divided into three sets of material of increasing difficulty. In Set A the students use "so" and "because" in order of mention. For example:

Bill wanted a new bike so he saved his money.  
Because Bill wanted a new bike, he saved his money.

Set B deals with "because" in and out of order of mention. For example:

Because Kathy was hungry, she bought a pizza.  
Kathy bought a pizza because she was hungry.

Set C compares and contrasts “so” and “because” in order of mention and out of order of mention. For example:

Ann was late so she ran to school.  
Because Ann was late, she ran to school.  
Ann ran to school because she was late.

The tree sets follow the same format. Transparencies are used to introduce the concept. They present two pictures, a simple descriptive sentence under each picture, and the sentences conjoined with the conjunctions. The conjoined sentences are initially covered with a mask. The class will first determine which picture represents the cause and which represents the effect. The teacher will then show the students how the two sentences can be conjoined by moving the mask to reveal the appropriate sentence. The class will discuss other possibilities for conjoining the sentence, and the mask will be moved to show the second conjoined sentence. Set C contains a third sentence.

The class will repeat this activity using manipulative cards and sentence strips. Rather than having sentences already conjoined, the students will move the “so” and “because” into position. The students will then complete activities in the workbook. The activities involve writing “so” and “because” in the proper blank, matching sentences which use “so” with those using “because” and which have the same meaning, and matching the two parts of a sentence which are conjoined with either “so” or “because.”

The next activity will be done in a group, and a transparency will be used to show the students how they can join sentences. The transparency has two simple sentences, one the cause and the other the effect. The students will first determine which is cause and which is effect. They will then be asked to write the sentences in blanks containing conjunctions in their proper positions. After the group activity, the students will repeat this activity individually in their activity books.

A transparency is used to introduce the last activity. It has a short story which involves cause and effect, followed by “why” questions with multiple-choice answers. The class will read and discuss the story together. A mask will then be moved to reveal the first question. The class will suggest answers, and the mask will be moved to reveal three possible answers. The class will choose the correct answer. This procedure will be repeated for the other questions and answers. For Set C the students will not be provided with possible answers; they will have to supply the answer themselves. This group activity is followed by identical workbook activities, which will be completed independently.

The *Causality* package will be field tested with students in fall 1981 but teachers have provided input throughout the development process.

*Voting Package.* Basically, there are two goals for the information-seeking and decision-making package on voting, intended for high school aged hearing-impaired audiences. The first goal is to provide the learner with information on the voting process itself.



There is considerable and variable information to find out on registering to vote and actually voting in different regions throughout the country. The second goal is to engage the learner in information-seeking and decision-making activities. This multi-media package includes two captioned filmstrips, a captioned videotape, and a student activity packet. The learners will be involved in finding registration and voting information for their own location. They will also examine any issues that may be occurring in whatever area of the country they are in.

The first filmstrip is a procedural overview on registering and voting. This filmstrip will offer information on various methods used throughout the country and ways to obtain information. For example, one can look in the newspaper and find ads by the League of Women Voters, one could see a poster, and one can telephone or visit the city council or court house. The learners need to become aware that there are numerous ways to find the information they require for this process.

Secondly, MDPHI is producing a videotape that should be enjoyable and informative. The videotape is about a young deaf person's first experience in voting for mayor. The deaf individual has an older, more experienced deaf friend who involves the younger friend in examining some campaign issues and voting. The young deaf person goes about finding information on two mayoral candidates by clipping out articles from the newspaper and collecting campaign literature. In the end our young friend actually goes through the voting process. His final choice is never revealed however, because the learners in the class will be voting for the same candidates in a mock election.

Next, the students will view a filmstrip of the mayoral candidates that were seen on the videotape. Throughout the filmstrip a captioned speech will run through various scenes of the candidates shaking hands, giving talks at banquets and on TV, and at other campaign functions. Based upon this filmstrip, the students will discuss their personal impressions of the candidates and the issues raised by each candidate. One candidate is female and the other is male of ethnic background.

The student activity packet contains the campaign literature that was collected by the young deaf person in the videotape. It will also contain posters, buttons, and newspaper articles. The students will actually go through the process of discussing the issues raised by each candidate, and finally electing a candidate. The intent of this package is to make the experience as authentic as possible.

The voting package is scheduled for final field testing in September or October of 1981. Throughout the design process, however, an ongoing evaluation and review process of the materials has been contributed by teachers and experts in the field.

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## EVALUATION

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There are two components to the evaluation process. Each component is briefly described:

### **Teacher Product Review**

Teacher product review is viewed as a pre-field test evaluation. Teachers are asked to provide input on the instructional materials at various times during production activities. Input at this time is very important as it enables the production staff to make valid modifications prior to field testing. Product review teachers are asked to respond to various questions concerning the product with regard to their own teaching experience. Since student input is not obtained during this aspect of the evaluation, the data gathered is more of an opinion type and provides less formal input than would be obtained from field test data. Teachers are currently involved in this process for two instructional materials (Causality and Voting) being developed by MDPHI.

### **Field Test Evaluation**

The field test evaluation activities of MDPHI are based on the premise that all instructional materials that are specifically designed or modified for use with the hearing impaired should be tested with appropriate target populations before marketing or distribution occurs. As a result, MDPHI has developed an instructional design and evaluation system which provides student performance data to assist in modifying and refining instructional products. The relationship between the design and evaluation functions in this system are illustrated in Figure 2.

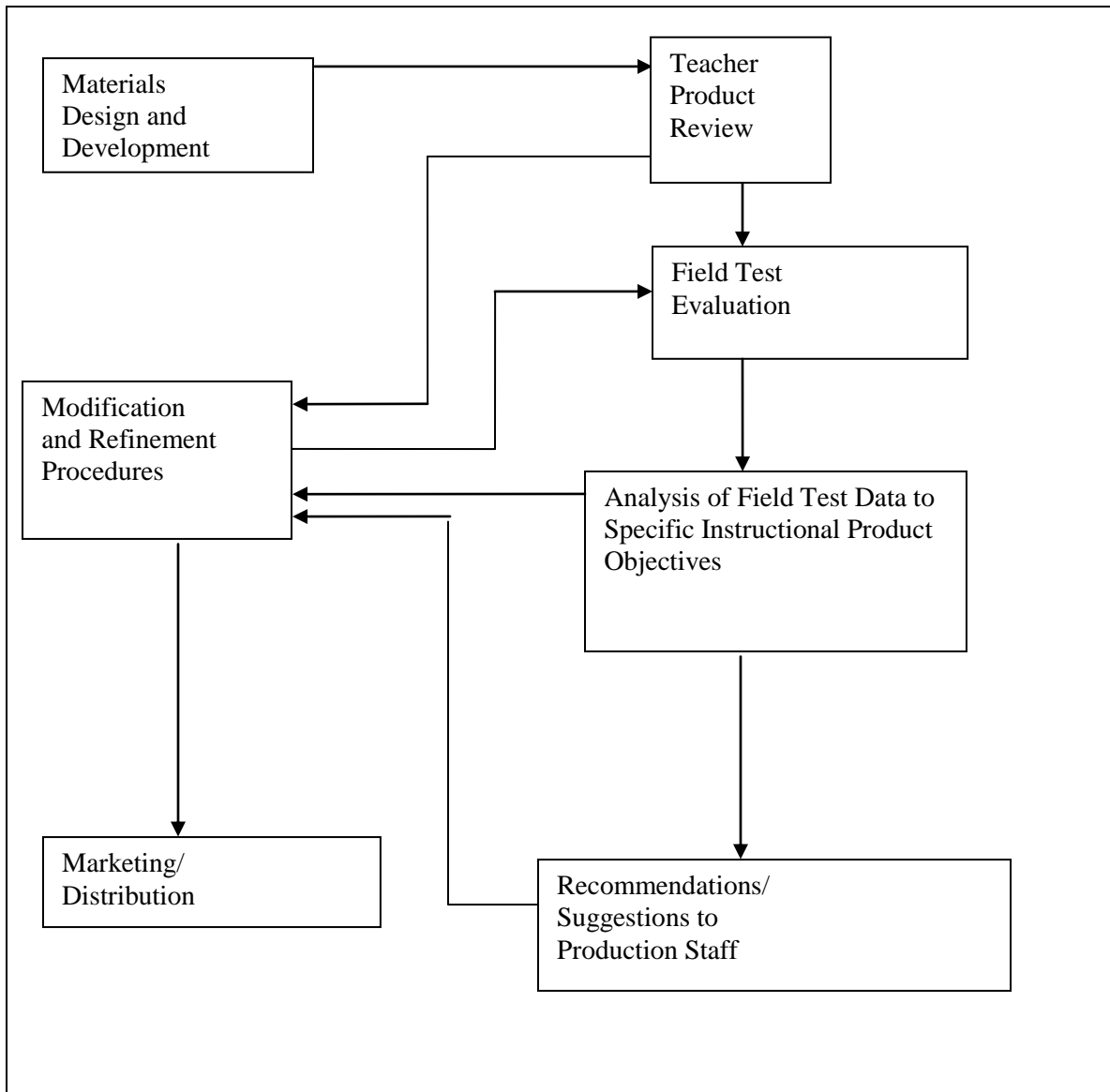
In order to facilitate the field test process, MDPHI maintains an extensive file of schools, teachers, and student populations which are available for field testing. An Apple II microprocessor is currently being used to aid in the maintenance of this file. Since its inception, MDPHI has made 125 field test placements in 40 states at 80 schools. This national approach to evaluation provides a broad population base for assessing a wide variety of instructional products ranging in grade levels from preschool through 12<sup>th</sup> grade. The location of our various field test sites is displayed in Figure 3.

The purpose of the MDPHI field evaluation process is to assess usability of various products with specific hearing-impaired populations. The evaluation is aimed at a detailed analysis of the feasibility of product use with deaf students and the identification of aspects of product materials that might need further modification or development.

### **Datagram**

In an effort to provide a means of information exchange between the evaluation staff of MDPHI and the educators of the hearing impaired within the MDPHI evaluation network, periodically a datagram-type communication will be issued. It is felt that it is important that educators be kept informed of those activities of MDPHI which relate to

the instruction of the hearing impaired. The first issue was mailed in April. Further issues will be mailed every several months.



**Figure 2. The Material Development and Evaluation Process.**



**Figure 3. MDPHI field test sites.**

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## SUMMARY

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For those who have attended a number of symposia, this one has to be the most interesting of all. There are two reasons for that. One, we are entering into the era of educational conservatism, and sometimes we start to wonder if what we're doing is really making an impact. Sometimes the evidence is there; often it is not. When you start to question the wisdom of what you're doing you need to hear about the accomplishments of media personnel in various school programs, like Bob Schmitt at Fremont, Dona Chapman in Portland, Ken Hanks in North Carolina, Gerald Pollard in Texas, and a long list of media soldiers across the country who are really doing something positive in the education of deaf children. The second reason is that most presenters were using materials made in their school IMCs. This is cost-effective educational technology and proves the point we want to make that media is practical. Sooner or later within your school or within your state you are going to meet people who will tell you that educational technology is okay—if you can afford it. Really, they will say, all you need for education is a highly motivated student with a “Big Chief” pencil tablet and a dedicated teacher with a piece of chalk. Don't believe it!! The romance of this age is technology. Let's not deceive ourselves into believing that we don't need educational technology. You simply can't tell your students that “you be a good boy, keep your nose clean, do your homework and, when you finally finish school, you can get a good job with Texas instruments, IBM, or Xerox.” It makes sense to believe that the *tools of learning should compare well with the tools of earning*. That's the message of the 1981 Symposium.

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