

Tape Recording Educational Materials for Secondary Handicapped Students

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■ In recent years there has been a concerted effort on the part of advocacy groups, legislators, and the courts to demand that, to the maximum extent appropriate, handicapped learners be educated with students who are not handicapped. This concept, commonly referred to as the least restrictive alternative, has been embodied in Public Law 94-142, the Education for All Handicapped Children Act.

Although the humanistic goals of the act are admirable, the regulations of the law present special education and regular classroom teachers with an educational dilemma. In order to appropriately integrate secondary level mild and moderately handicapped learners into the mainstream of regular education, teachers need the availability of techniques that:

1. Are appropriate for the cognitive, physical, and sensory characteristics of handicapped learners.
2. Effectively present the curriculum.
3. Maximize learning experiences for the students.

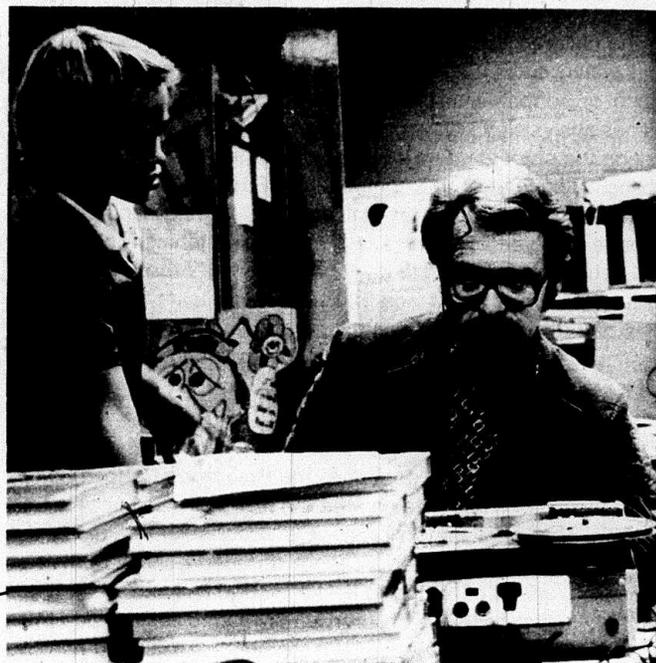
While the availability of such techniques is limited, the tape recording of text material is a widely used procedure that meets the above requirements. Tape recorded reading assignments minimize students' reading deficits and thereby allow them to stay current with class assignments and to supplement the information presented in classroom lectures. Nonetheless, to ensure that students receive maximum benefits from taped materials, tapes must be prepared so that they minimize student learning through effective organization and presentation.

The purpose of this article is to describe six principles that underlie the effective use of tapes in delivering content material to handicapped learners in secondary schools.

WHY TAPE TEXT MATERIALS?

The development and use of tapes to deliver content materials provide teachers with a technique that compensates for the specific disabilities of a handicapped learner and the curriculum

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demands of the school. Many handicapped learners evidence skill deficits in the basic subject matter areas of reading, spelling, and writing. A handicapped youngster at the high school level may read in a word by word manner with a minimum or text organization. Although the student may approximate functional reading competency, these skills are seldom adequate for meeting the curriculum demands of secondary schools where, for the most part, content is presented in a lecture format and through reading assignments. The handicapped youngster who evidences minimum note taking and reading skills will have great difficulty in using these skills to comprehend, learn, and master new content material. These students require techniques that can circumvent or lessen the effect of their skill deficits.

The level of cognitive development of many secondary handicapped learners is often greater than suggested by their skill development level. A 10th grade student who cannot read *A Tale of Two Cities*, for example, may be able to comprehend the delicate interaction of characters and events if he or she sees the movie. This situation implies that for many mainstreamed handicapped learners at the secondary level, teachers may emphasize the acquisition of content which is more appropriate to their cognitive development level than their level of skill development. Clearly, many handicapped learners can comprehend and learn complex information if their skill deficits are avoided or their effects lessened. The development and use of taped materials provide teachers with a technique by which appropriate content material can be acquired while the youngsters' weaknesses are circumvented or minimized.

The effective use of tapes to deliver content materials to handicapped youngsters, however, requires much more than merely taping verbatim from a book or a lecture. Effective use of taped content material includes:

1. Decisions concerning what is to be taped.
2. Use of taped materials to teach text usage and study skills.

* Before preparing or using recorded material with a particular student, an analysis of the student's listening capabilities should be conducted.

3. Effective application of principles of learning.
4. Use of a marking system to aid students with coordinating tape recordings with text materials.
5. Careful consideration of the mechanics of recording.
6. Evaluation of the effectiveness of taped products and the learning that results from using them.

DECIDING WHAT SHOULD BE TAPED

For practical reasons, an entire textbook or chapter should *not* be taped, in most instances. First, it requires too much time to tape an entire text. Second, it is difficult to maintain the student's attention and motivation on texts that have been taped verbatim. Third, listening to a long text may require more time than students have available to them. Major instructional goals and objectives should be identified and key sections of the reading assignment should be designated for taping. Material not taped may be paraphrased or briefly outlined to aid students in seeing the context within which the taped section is presented.

The decision concerning which content to tape should be made by the regular classroom teacher, who is the content expert. The regular classroom teacher is in the best position to specify which content is most critical as it relates to the major instructional objectives of a given unit of instruction.

Some exceptions apply to the guidelines of not taping everything. For example, short stories, poetry, or short literature selections must usually be taped in their entirety to maintain their effectiveness. Nevertheless, for most reading assignments in subjects such as science, social studies, health, etc. judicious

decisions can be made regarding critical content to be presented on tape. Students can then be required to listen to the tape several times. Such review and concentrated exposure to key content usually promote retention and application of the material and are, therefore, more helpful than providing the student with a superficial and equal exposure to an entire reading assignment.

TEACHING TEXT USAGE AND STUDY SKILLS

A major reason for taping reading assignments is to give students an alternative means of acquiring the content. However, taped reading assignments can also be used advantageously to teach test usage and study skills. While taping a reading assignment, a teacher has an excellent opportunity to demonstrate how to differentiate between main and supportive material within a chapter; how to use illustrations, graphs, charts, etc., to aid comprehension; how to use questions at the end of a section or chapter to determine major points; and how to use chapter titles, section headings, etc., to skim a reading section for main ideas. Therefore, whenever students are listening to a tape recording of reading materials they should always have the textbook in front of them.

Using another method to teach text usage and study skills, the teacher may say on the tape, "Before reading Chapter 3 let's preview the chapter to get an overview of what it will be about." At this point the teacher can take the student through an overview of the chapter by requiring the student to follow along. Similar instruction can be provided at different points throughout the tape. For example, when discussing the content in a certain graph or table, the teacher may point out parenthetically to the

THE REPUBLICANS COME BACK TO POWER

President Wilson and His Ideas Had Become Unpopular. The Republicans were optimistic when their party held its convention in Chicago in the summer of 1920. Woodrow Wilson, a Democrat, had been President for eight years and had led the country through a period of reform and then through World War I. But now Wilson and his ideas had become unpopular.

Many Americans now began to reject the Progressive program. In foreign affairs they preferred a return to America's traditional policy of isolation. They blamed Wilson for the war and believed involvement in the League would be a mistake. They thought we should stay out of Europe's continual quarrels. The American people wanted the end of government intervention in business. By 1919, the country was returning to its old ways.

Farmers were perhaps the most discontented people of all. During the war boom when they were selling all they could raise for good prices, they had gone into debt to buy more land and machinery. Then the prices of farm products dropped sharply after the war, and they had great trouble paying their debts.

All in all, the people were very dissatisfied. They were ready for a change of leaders.

The Parties Name Their Candidates. As their candidate for President, the Republicans named Warren G. Harding. Harding was a newspaper publisher from Marion, Ohio, and he was the United States Senator from Ohio. He had made no great name for

himself as Senator and was scarcely known outside Ohio. The leaders of the convention chose him because he seemed the opposite of Wilson and because he would carry out the wishes of the party leaders. For Vice-President the Republicans nominated Calvin Coolidge, the governor of Massachusetts.

The Democrats, on the forty-fourth ballot, nominated James M. Cox. Cox was a newspaper publisher from Dayton, Ohio, and the governor of the state. So, in the Presidential election of 1920, two Ohio Newspaper publishers were opposing each other.

For Vice-President, the Democrats nominated Assistant Secretary of the Navy, Franklin D. Roosevelt, a distant cousin of Theodore Roosevelt. We shall read much more about Franklin Roosevelt later in this book.

Harding Is Elected. Cox and Roosevelt knew that the ideas of President Wilson were unpopular, but they campaigned for them anyway. Both Democratic candidates vigorously supported the League of Nations.

Harding did not commit himself on most of the issues of the day. His chief promise was that he would "lead the country back to normalcy." He did not say exactly what he meant by normalcy, but the promise sounded good to people who were tired of war, and high taxes, and high prices.

From his sickbed Woodrow Wilson announced that he would consider the election a "solemn referendum" for the League of Nations. If the people supported the Democrats, they would be supporting the League. But Harding defeated Cox by seven million votes, and the Republicans won majorities in both houses of Congress.

The people of the United States had clearly turned their backs on the ideas of Woodrow Wilson. These included his ideas of reform.

THE NEW DEAL CONTINUES 1934-1937

Events of 1934. Congress met again in 1934. Most of the laws passed at this session strengthened the ones that had been passed so hurriedly in 1933. Two laws of 1934 deserve special mention.

The Tydings-McDuffie Act provided that the Philippine Islands should be given their independence in 1944. As events turned out, independence was delayed until 1946, because the Japanese invaded the islands in World War II.

The Trade Agreements Act gave the President important powers in regard to the tariff. He could negotiate with other countries and agree to lower tariff rates as much as 50 per cent for any country which would grant us low rates. This was the beginning of a new era in our trade with other nations. Almost constantly since the Civil War, we had been raising our tariff in order to protect our manufacturers. This policy had led to high prices at home and to ill-feeling toward us in other parts of the world. During the Depression our high tariff had almost completely killed our trade with other nations. Now we were recognizing the fact that we should buy from other countries if we wished to sell to them.

In November, 1934, the people showed that they approved what the New Deal had done in its first two years by electing even larger Democratic majorities to both houses of Congress.

The Supreme Court Overrules New Deal Laws. For two years Congress had granted President Roosevelt almost everything he

asked. His first big defeat came not from Congress but from the Supreme Court. In May, 1935, the Court handed down decisions which declared four New Deal laws unconstitutional. The most important of these was the decision by which the Court by unanimous vote declared null and void the law under which the NRA had been established. The NRA was not the success that had been hoped for, and few people were sorry to see it go. It was the reason behind the decision that worried the President's followers.

The Constitution gives Congress the right to regulate interstate commerce only; that is, commerce between the states. Congress has no right to regulate a business that is carried on entirely within one state. The New Deal lawyers knew this, but they felt that almost every large factory or store is engaged in interstate commerce. The Supreme Court ruled otherwise. It said that a factory was operated entirely within one state, even if it got its raw materials from other states and sold its products in other states. A store was operated in just one state even if it was owned by a chain with headquarters in another state.

The Court ruled that even though the Depression was a great emergency, Congress still had no power to make rules for most industries. The federal government was not to take away rights which belonged to the states. "Extraordinary conditions do not create or enlarge constitutional power," the decision said.

This decision seemed to mean that the federal government had no power to make laws about hours and wages. President Roosevelt had promised to help the workingman, as an important part of the New Deal. Now he would have to try other ways.

A system of marking the reading material must be developed to help the student follow the tape recording. The samples are from Bernard, L., Brande, R., & Sharkey, D. America and its people. New York: W.H. Sadlier, 1968.

student how effective a particular table is in presenting the ideas contained in three pages of text. While not lengthy in nature, such hints can be highly effective in improving text usage and study skills that will aid the student in becoming a more effective and independent learner.

USING PRINCIPLES OF LEARNING

The preparation of effective taped materials requires the inclusion of activities and techniques that foster motivation, comprehension, and learning. Similar to the development of a reading series or a set of programmed materials, the development of taped materials requires the careful selection and judicious use of instructional techniques that follow principles of learning. In preparing tapes, it is important that teachers select materials that are interesting and motivating to students. The content selected should be moderately familiar to the student and also novel enough to be stimulating. Curiosity and motivation can be enhanced if an initial survey of the content material, along with preparatory questions designed to stimulate inquisitiveness, are provided at the beginning of the tape. Furthermore, interest can be sustained by involving the learner in a variety of activities.

Comprehension of the tape content can be facilitated by the expeditious use of summaries, paraphrases, analogies, explanations, and examples dispersed strategically throughout the tape. An initial survey of the content material will provide the learner with a structure to which specific facts or ideas can be related. Also, it is often helpful to provide concrete explanations of abstract terms. The appropriate use of these techniques will aid students in relating the content of the tape to what they already know and thus facilitate comprehension.

However, comprehension is only one aspect of instruction. In addition to understanding what is on the tape, the learner will be expected to remember important facts and relationships. In order to foster this type of learning, the tape should be prepared so that it:

1. Is well organized.
2. Provides a variety of activities.
3. Highlights or cues important points.
4. Contains a variety of questions designed to facilitate recall and critical analyses.
5. Repeats key concepts or ideas.
6. Accommodates the assimilation and/or practice of new concepts or ideas.
7. Provides immediate and delayed feedback.

USING A MARKING SYSTEM

Given that a reading assignment is not taped in its entirety and that several planned activities are dispersed throughout the tape, it is necessary to develop a system for marking the textbook used by the student while listening to the recording. Without such a marking system it is very easy for the student to get confused and lost. While the marking system need not be elaborate, it must be consistent so the student will know what to expect and do each time a certain mark appears in the text. As the tape is prepared the teacher should mark the written material that will correspond with it. The following represents an example of a

simple marking system: (~) a wavy line denotes material that will be paraphrased. Thus, a wavy line can be drawn in the margin beside material that will be paraphrased on the tape. The student will then know when to listen and will not try to follow all of the prescribed text. (---) a dotted line indicates material that will be omitted altogether on the tape. (☆) a star indicates that the tape must be stopped and that the student is to complete an activity or sample problem related to the taped material. (—) a solid line drawn next to text selections designates material that will be read verbatim on the tape. Depending on the nature of the reading assignment and related activities, marking systems can be expanded or modified to meet the prescribed needs of the student. The sole purpose of a marking system is to assist the student in coordinating the selected information presented on tape with the material appearing in the text and accompanying exercises.

GOOD RECORDING MECHANICS

Once the content material is organized and ready to be recorded, it is important that the tape be prepared in a setting that is relatively free of distraction. The quality of the tape can be seriously impaired by frequent disruptions and excessive background noises. It is important that the recorded voice be fluent and audible and that appropriate pauses are made at punctuation marks, etc. Speaking rate should be between 120 to 175 words per minute. Upon completion of a recording, the teacher must listen carefully to the tape to ensure that it is understandable and that the content is correct.

Similarly, when using a tape, the student should be familiar with the mechanics of operating the tape recorder (to prevent tapes from being erased) and with the specific directions for the use of a particular tape. The setting in which the tape is used should be well ventilated, properly lighted, and free from excessive distractions and noises. The teacher should provide appropriate reinforcement and feedback.

Once a tape is prepared, proper care is essential. Tapes and tape recorders should be stored in a suitable place in an organized manner. Occasionally, each tape should be monitored by the teacher. If a tape becomes defective or difficult to understand, it should be replaced.

EVALUATION

To prepare and use tape recordings of reading assignments is time consuming for both teachers and students. Consequently, if it is found that valuable preparation and instructional time is not being effectively used, changes must be made. The quality of the prepared tape recordings and the performance of the students using the recordings should be constantly monitored and evaluated. As with any teaching material or technique, tape recordings of reading assignments are *not* appropriate or effective with all students. Therefore, they should only be used with those students who show gains and benefits through their application. For those students who do benefit from their use, recorded tapes should be prepared and evaluated in such a manner as to promote the acquisition of key content materials from classes into which they have been mainstreamed and to aid them in improving their study and text usage skills. The six steps outlined in this article have been designed with those considerations in mind.