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Anyone considering the installation of an information retrieval system is encouraged to consider the advantages of an inexpensive student-controlled cassette-based system such as that described here.

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# Cassette Retrieval Systems: A Solution to DAIRS Problems

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**T**HE Dial Access Information Retrieval System (DAIRS), only a few years ago considered the best means of disseminating information to large numbers of students, is no longer experiencing great popularity among educators. Many institutions may soon be following the lead of Wesley College (Dover, Delaware)<sup>1</sup> and Brevard Community College (Cocoa, Florida)<sup>2</sup> which have recently discontinued use of the DAIRS.

## Installation of the DAIRS

Before the opening of Tarrant County Junior College's Northeast Campus (Fort Worth, Texas) in 1968, ways of retrieving information by students were studied. Con-

<sup>1</sup> Joseph Koency. "An Innovation at Wesley." *Community and Junior College Journal* 43 (9): 15; June-July 1973.

<sup>2</sup> Jack Carroll. "DAIRS—Me, Too." *Dialog GT-70* 1: 1; July 1973.

sideration was given to the number of students needing information sources, the range of subject areas requiring tape recorded materials for playback, the speed of retrieval upon request by students, and the lack of necessity of student handling of software. The Dial Access Information Retrieval System was selected as the best means of providing a rapid source of information to large numbers of students.

The DAIRS was housed in the Learning Resources Center (LRC). The central control room was equipped to run simultaneously 90 audiotaped programs and three videotaped programs. Thirty-five carrels in the Programmed Learning Center of the LRC were designed for retrieval of audio programs; twenty of these carrels also had video retrieval capability.

In addition, thirty more carrels in the

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Foreign Language Laboratory were installed in such manner as to make available audio retrieval from all 90 sources as well as to offer five audio and three video instructor-controlled sources from a console.

### **Problems with the DAIRS**

During the first two years of operation, several problems with the DAIRS became apparent. The problems were centered around one main obstacle: the student had no control over his source of information. For example, if a student stopped a tape in order to take notes, an automatic rewind circuit returned the tape to its initial point, necessitating his listening to the first part of the program again in order to get to the place where he had stopped. However, if any other student were listening to the tape at the same time, one could not rewind the tape to listen again to the beginning unless all persons who had dialed into the program pushed their rewind control buttons. Also, once a tape was activated by a student, any other student desiring to hear the program would have to start listening in the middle of the program or return at a later time to try again. The frustrations were similar for videotape retrieval.

Thus, the DAIRS perpetuated lock-step procedures while many faculty members were developing and attempting to implement individualized instructional programs.

### **An Alternative Strategy**

As a result of these frustrations, members of the Department of Foreign Languages sought an alternative design which could assist in the implementation of a self-paced individualized learning system. The solution was found in the installation of inexpensive cassette audio-tape recorder-players, slide projectors with small rear-projection screens, and a few cartridge videotape players.

A library of short, single-concept cassette audiotapes was developed in French, German, and Spanish. Currently more than 800 cassette tapes of different titles are available to students. Correlating slide series were

also produced to accompany many of the tapes. Reel-to-reel videotapes were duplicated onto cartridges.

High-speed duplicators make possible the production of multiple copies of each tape in order to provide the number necessary to meet student demand each semester. (The number of copies needed is determined by a computerized study of software utilization in the laboratory.) The duplicators also provide the means to make rapid copies of tapes for students to take home to use. Thus, large numbers of students can use a large variety of information sources in any sequence for variable lengths of time each day. They can start, stop, rewind, review, or skip parts of tapes as needed. Cartridge videotapes make possible similar utilization of the video programs. As a result, a truly self-paced individualized program has been developed and implemented.

### **Benefits of the Cassette System**

There are other benefits of the cassette system. Cost factors are minimized since a cassette system is much less expensive to install than a DAIRS, and cassette tapes can be purchased for only one-third the cost of reel tapes. Also, simple playback units are easier to maintain than is the complicated wiring of the DAIRS. In addition, storage problems are alleviated since hundreds of cassette tapes can be stored in the space necessary for a few dozen reel tapes.

Furthermore, the ease of operation of the cassette system has encouraged more faculty members to design programs and to develop materials for use on the system. The former Foreign Language Laboratory has been converted to an Oral Response Laboratory in which students of mathematics, biology, and speech use materials side-by-side with language students.

The last three years of operation with a cassette tape system have been rewarding. Anyone considering the installation of an information retrieval system is encouraged to consider the advantages of an inexpensive student-controlled cassette-based system before making a selection. □

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