
Laser Disk Portfolios: Total Child Assessment

Multimedia technology has transformed the assessment process for students and teachers at a rural elementary school in Wyoming.



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As this story begins, a 4th grade student is sitting at a multimedia system consisting of a computer, CD-ROM drive, optical drive, scanner, and laser printer. The student has requested that a story he wrote become part of his permanent assessment record. He is scanning his work onto his laser disk. As he works, another student asks to take the video camera to the art room. She wants to record a video of herself throwing a pot on the potter's wheel as one of her assessments for the year. When she finishes, she returns to the multimedia system to transfer the video to her laser disk.

Earlier today, a student has used the video camera to record the play in which he had the leading role. Another student has documented on disk that she has the ability to climb the rope in physical education class.

All of this is happening at Conestoga Elementary School in rural Wyoming, where the idea of creating portfolios of students' work as a means of assessment has been combined with laser disk technology. The laser disk portfolio assessment system is based on the work of IBM consultants and researchers from Project Zero at Harvard. A grant from the Wyoming State Department of Education Super School Program helped our school purchase the necessary IBM hardware. While the technical implementation has had its frustrating moments, the IBM consultants and school staff have persevered.

Using Laser Disk Assessments

Students and teachers at Conestoga have begun to use the laser disk portfolio assessment system this year. Large amounts of information can be added to or retrieved from the system as many times as necessary. Yet the laser disks are so small they can slide into any student's permanent file, eliminating the need to find additional filing space.

Teachers can use the system to research their classes before the first day of school. The system helps them do something as simple as putting students' names and faces together, or something as complicated as deciding what teaching and learning activities would best increase outcomes for the students.

To begin planning assessment, grade-level teams determine criteria to evaluate growth for each child. Teachers do a preassessment the first month of school by videotaping their students. These preassessment videos might record a student playing a game with another student, reading a story of the student's choice, or answering a few questions as the video camera records the student's ability to talk with an adult.

Teachers plan to use the system for formal assessments at least twice a year with each student. Has the student gained reading fluency? Has handwriting improved? How else has the child grown? Questions such as these can be answered by reviewing the disk.

During the school year, teachers can review the disks of students who are struggling with schoolwork to determine what the students' interests are and in what areas they have excelled previously. The disks can be used to motivate the child who says, "I can't do it," by showing how much he or she has done over the years. Self-

esteem builds as the accomplishments of each child are recorded and as growth is measured against individual standards, rather than group standards.

At the end of the school year, an annual ritual of passage will take place as each 6th grader and his or her parents, along with the teacher and principal, review the student's disk from kindergarten to 6th grade. We are expecting tears and laughter and possibly embarrassment from students viewing their antics of years gone by, but we are also predicting that every family will want a copy of the disk for a personal history. In any event, the school will keep a disk for its records.

Implementing the System

A school planning team handled the implementation of Conestoga's laser

disk portfolio assessment system. The counselor made home visits to talk to parents about the system and ascertain any concerns or ideas about assessing in this manner. Implementing the complete system with just one class the first year allowed staff participants to acquaint themselves with the system and become comfortable with the equipment before launching into assessments of the total school population.

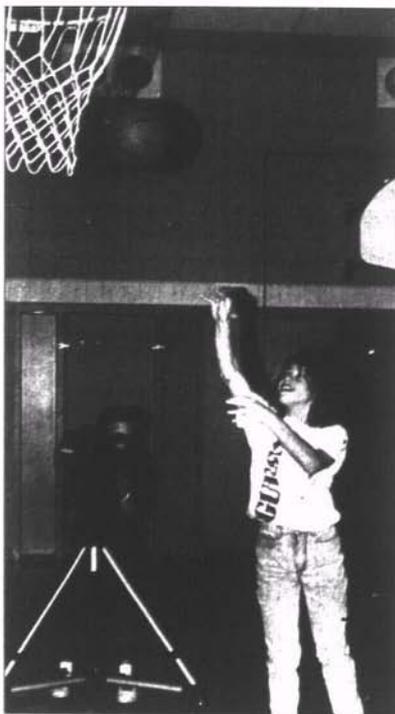
The kindergarten class will be the first class to be followed through the grades. This year we videotaped the kindergartners answering predetermined questions and transferred that image to their laser disks. Teachers also scanned the children's drawings onto the disks.

Getting a Complete Picture

Portfolio assessment is not a new concept in education, but a system that allows permanent storage of optical data, written and drawn images, and verbal ability is new. The staff and parents at Conestoga are excited about this new assessment system, especially as it relates to increasing student self-esteem. Recognizing that child development involves more than cognitive growth is the underlying belief behind the system. The students, parents, and staff will be looking at the laser disk portfolio assessments to determine growth in verbal ability, physical accomplishment, artistic achievement, and self-assurance. □

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