11 EDUCATION AND ACCESS

The New National Gallery Videodisc on American Art

Ruth R. Perlin
Head, Education Resources
Education Division
National Gallery of Art
Washington, D.C.

At one of the first conferences devoted to museums and education, the late Frank Oppenheimer, who "invented," founded, and directed the Exploratorium in San Francisco, is quoted as saying, in the course of his comments on the educational role of museums, that "The . . . thing that both art and science have in common. . .or one of the things. . .is that they are both increasingly concerned with the inaccessible. . . ." (Larrabee, 1968)

He was, of course, pointing up the questions of both meaning and access. As an art museum educator, I share with my colleagues that task of trying to make the inaccessible accessible and significant. The crux of museum education is the accessibility, in the broadest sense, of our collections and exhibitions to the public. As with most museums, the National Gallery views educating its audiences as a matter of importance; the corollary of this idea is belief that education is contingent on the public's access to museum resources, namely, our collections. The interpretative, or educative role means considerably more than a simple "open door policy"; much thought and energy are devoted to developing ways in which our collections can be more effectively understood; programmes for interpretation (guided or recorded tours, lectures, symposia, films, multimedia presentations) are carried out for the benefit of museum visitors.

This overlooks, however, those persons who cannot visit the museum and, too, those works of art that may not be on view. To redress this situation, the National Gallery makes a point of supporting programs for national audiences a challenging educational task, and one that is somewhat different from the usual one. In this paper, I should like to discuss a recently completed project - a videodisc devoted to the Gallery's collections of American art (paintings and sculpture) as well as more than 1,500 works of art on paper, as an example of our use of new media and electronic technology to carry out our educational mission for a community that is nationwide.

A major section of my department at the Gallery is responsible for a programme for developing and providing educational resources to the large national public. The problem with which we deal daily is that of determining the form and content of resources that are intended for an audience that is not only vast, but is extremely diverse, reflecting the multiplicity and variety in the nation's population, and also, in its educational constituencies: differences in students and in teachers - in settings that range from

primary grades to universities to continuing education programs; and countless geographical variations: small villages and towns or large metropolitan areas - from New England to the Southwest, from Texas to Wyoming. (The educational system in the United States is itself extremely varied, with individual states decreeing curriculum content and the sequence of subjects studied, and authorising instructional resources. And there are county-by-county variations on these centrally mandated requirements.) Given this situation, we have had to develop a programme for providing access to Gallery resources that is sensitive to the innumerable special needs of the groups we serve.

The complexities of the methods of bringing visual, aesthetic and intellectual resources to a broad national audience have influenced and informed the development and production of our educational programmes (termed as a group "Extension Programmes") for distant audiences. There is a range of program forms, colour slide programmes and audiocassettes, films, videocassettes, all on Gallery collections and special exhibitions, and we have, over the years, tracked and implemented the use of new media in order to offer audiences new options. For example, by the time videocassettes were beginning to be used in classrooms and in homes (around 1980 in the U.S.) we had converted our film titles to that form; it now outstrips the use of film by a considerable margin. Normally programmes incorporate a variety of components and of ideas about the subjects, and encompass many disciplines in scholarly essays and other commentary; slides, other visual materials (printed, filmic, still and motion images) and supplementary audio recording of music or poetry of the period, for example. The topics of the programs range widely, from monographic treatments of artists to surveys of a period or national school. Modular in design, these components are meant to be a collective resource from which educators can select appropriate images and information, to be configured - or reconfigured, to suit individual needs and interests. All the programmes, taken together, are seen as collections of resources, just as the elements within the programmes are themselves, on a smaller scale, "***collections of resources***" to be used flexibly. Choice among programmes and programme elements permits our audiences great latitude in adapting materials to their needs. It is this idea of flexibility of use that has been and is one of the underlying principles of our program design. Permitting the learner and the teacher to select those parts of programs that are most relevant to their educational objectives is of paramount importance. This concept informs our view of new educational technologies.

This brings us, finally, to videodiscs and digital imagebases. Along with our concern for flexibility in programme design and in use, we have made it a point to remain current with emerging technologies and trends and, simultaneously, to monitor our nationwide audiences closely in order to recognise needs in terms of both content and form, or medium. In 1979 we began development of a project that was new for museums, a videodisc. Our intent was to provide a general overview of the Gallery and its collections. At that time, the videodisc medium represented to us the confluence of our ideas about flexibility of resources, of our interest in using new technologies, and of our projections of potential audience interest in this new media. Videodisc technology addressed our commitment to providing and enhancing access to the Gallery's resources, and thus was entirely consistent with the Gallery's educational mission. Although originally conceived as a Level 2 interactive disc, this videodisc, for a variety of reasons, was published in Level 1 format. We feel strongly that it was actually advantageous not to have embedded programming, for this emphasised that the videodisc was to be used as a basic resource - or collection of resources, namely images, around which programs might be developed. Thus, we stressed, and continue to do so, the value of a videodisc as a visual compendium from which individuals can design programs to meet individual objectives.

The original National Gallery videodisc was published in 1983, but it was not until the mid-80s, with the development of Hypercard programs and other applications, that the disc was widely accepted as a valid resource for educational programs in the arts, and in

many other subjects, primarily humanities disciplines. (In fact, that original National Gallery of Art videodisc was selected recently by educators in school districts across the United States as the preferred multimedia resource in the arts, through a survey conducted by the National School Boards Association.)

The linking of videodiscs, with their enormous capacity for image storage, and computer technologies has been instrumental in transforming the educational process across the United States. And now, with use of computer technology burgeoning - over 98% of United States public schools have more than 11 computers in their buildings - interactive technology has been embraced enthusiastically by the educational community. In the United States, videodiscs are the primary optical medium being used currently in conjunction with computers in the schools. (Fig.1) Educators at every level are integrating videodisc-cum-computer resources into curricula and also experimenting with developing new applications. The pervasiveness of interactive technology both reflects and influences the actions of many boards of education in the United States. We read daily in newspapers, journals, newsletters, of the official adoption or approval of videodisc curricula - in Texas, Florida, New Hampshire, Utah, New Mexico, for example, and of county boards mandating videodisc curricula - in such diverse states as California, Maryland, and Arizona. More than forty-four percent of public school districts in the U.S. are using videodiscs.

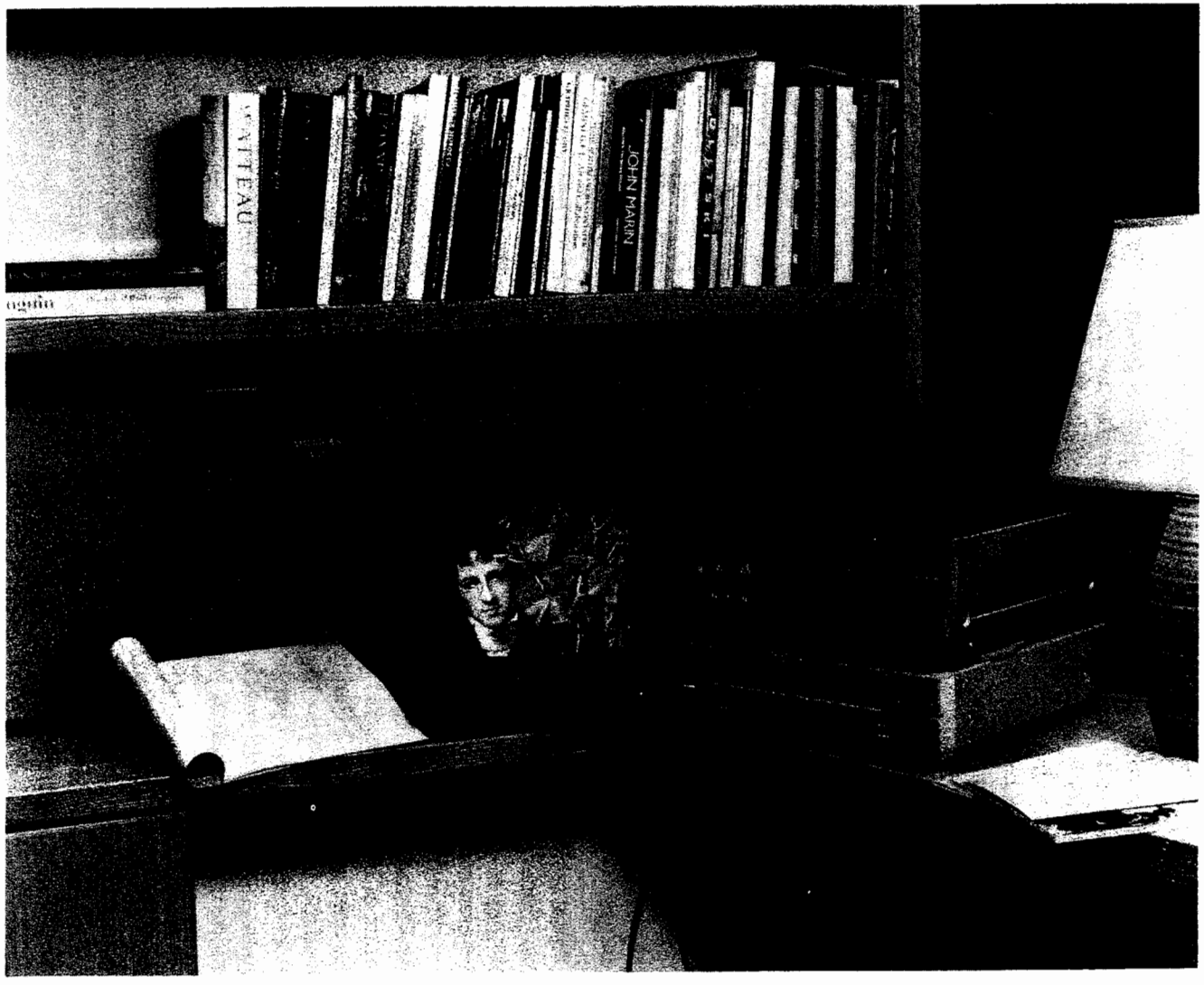
By the late 1980s, the original National Gallery videodisc had become a "staple" resource in educational programmes across the country. Building on the experience of developing the original videodisc and that of subsequently producing a number of films on American art, in 1990 I prepared a design and proposal for a second National Gallery of Art videodisc, this one focused on a single area of our collections: American art - the most extensive collection within our collections. Unlike the original videodisc, the still frame "catalogue" would be emphasised, and we would dispense with longer filmic programmes. This decision reflects our findings that our audiences, after initial viewing of the linear programs, concentrate almost exclusively on the "still-frame archive," and it is also consistent with the idea of broad accessibility of resources. In opting to place our emphasis on the still-frame images of the works of art in the American videodisc, we were implicitly and explicitly stating the programmatic objective: to provide both comprehensive and very close views of our American collections and the individual works.

Initially, I had visualised the American videodisc along the lines of the Louvre model, but in the course of development and production, a number of modifications were made. Thinking, at first, to use twenty or more major pictures in short segments to create an historical view of American painting, it became clear that each sequence would have to be relatively long in order to provide adequate presentation of the individual works of art. We were reluctant to create a major diversion from the heart of the disc: the individual images. Also because the still-frame catalogue had grown by more than five hundred works over our original projections, we knew that any motion sequence had to be well under twenty minutes. (In anticipation of creating an interactive educational program to accompany the disc, we also decided that much of the information we wished to convey about the works of art, artists, media, and other aspects of the art, should be within that programme.) But most importantly, the audience's interest in and need for a broad range of individual images had to be paramount. This is the most significant portion of the content for educators; that importance had to be reflected in disc design.

But, in considering how the disc would be most useful to our intended audiences, and because the majority of this audience are not scholars, we also needed to create context. To provide a basic framework for the history of American art, we altered our ideas for individual sequences in favour of developing a short motion segment as an overview.

Fig. 1 Classroom in Arizona, teacher using National Gallery videodisc

Fig. 2 Frame (showing detail of R. Peale, *Rubens Peale with Geranium*) of National Gallery of Art videodisc on American Art



Narrated by our Director, with some shots of the Gallery and the American galleries, this introductory sequence was designed to give the user a sense of American art, as seen in the Gallery's collections, and also a sense of place (the Gallery) of the reality of the art, the setting, and the museum environment, with visitors.

With funding from The Annenberg Foundation, including provision for giving 2,500 copies of the videodisc to educational institutions in every state, production began in the Spring of 1991. The original design called for approximately 2,000 works of art, but the final number now reaches almost 2,600 (virtually all of our American paintings and sculpture) and a large selection of American drawings, watercolours, prints, and renderings from the Index of American Design. Every work of art is shown as a full image, followed by a number of close details.

An increased number of works of art over original projections is one aspect of the modification of our original plans; the major change was in the production process. Initially, we anticipated using the video medium for the entire project, but within a year, due to advances in digital imaging, we saw scanned images at an extremely high level of quality. I was convinced that even though the final product would be in analogue form, it would be mistake to ignore the new digital technologies. With assurances that a digital imagebase could, indeed, be converted to the requisite master for pressing the videodiscs, we took this opportunity to capture every image in digital form, compiling a very large digital imagebase as the source for the videodisc master. We were able to work with images in any order, something we could not have done with video, and, most importantly, were able to colour correct, crop, create details that provide extremely close views of the works of art. Digital technology permitted us to use transparencies and slides that would have been impossible to use if we had to rely on the less discrete capabilities of video correction; we were able to restore colour, balances, even small sections of a composition. The American videodisc is, I believe, the first museum videodisc that has as its basis digital technology. The digital imagebase permitted us to obtain images of extraordinary resolution and clarity; happily, these qualities have extended to the final images on the videodisc itself. (Fig.2).

Digital technology has provided many advantages in respect to the visual quality of this program. Our audiences, in using this videodisc, have access to an extraordinary number of images of works of art that invite very close study. The videodisc also offers programmatic opportunities supportive of various educational goals as well as the means for exploring diverse ideas and subjects. Videodiscs such as this, then, can provide intellectual options. Access to great numbers of images that are coupled with a broad range of information and ideas about art, history, literature, in a form that is responsive to the user is something that is, and can be, liberating for audiences. The teacher and the student, individually or in groups, is no longer obliged to adhere to specific sequences or blocks of information presented in a set order. By virtue of this technology, the learner can go beyond the traditional boundaries or limits of subject and follow his or her particular interest, at an individual pace.

In serving the large and diverse national audiences that we reach, it is not only essential to offer resources of high visual quality, but especially, to reach out to these audiences with resources that can be tailored to their discrete needs and interests, programs that offer alternative solutions and ways of engaging with art. This, after all is our educational commitment to our public.