

Evaluating Museum Visitors' Use of Interactive Video

Tine Wanning

The National Museum of Denmark
Dokumentationseheden
Ny Vestergade 11
DK 1471 Kobenhavn K
DENMARK

Abstract

This paper describes the evaluation of an interactive video system exhibited at the Resistance Museum in Copenhagen. The system contains films and an image database of about 11,000 photographs.

The evaluation concentrated on four main themes:

1. The users
2. How the system was used
3. What the visitors thought of the system
4. The system in relation to the exhibition

The evaluation was conducted using observation, interviews, and questionnaires. The result of the evaluation is published in a report (in Danish, however) and the main points are referred to in the paper.

When you have spent a fortune on creating an interactive video system, it should be quite natural for you to evaluate it afterwards. And not only to find out if the money was well spent, for if turned out to have been a total flop, there wouldn't be much to do about it. Hopefully such failures are rare. Evaluations can also be very useful in gathering experience that will benefit future projects. Published evaluations could be very helpful, not only at the same museum, but also at other museums planning a project, perhaps for the first time.

At the National Museum of Denmark we produced an interactive video system with the title, "Danish Resistance during the German Occupation 1940-45." A department of the museum specializes in this period and has its own exhibitions in its own building, called the Resistance Museum. The main aim of the system was to supplement the exhibitions by

International Conference on Hypermedia & Interactivity in Museums

giving large scale access to some of the photographs and artifacts that we are usually unable to exhibit. To this material we added nine 3-minute video sequences presenting central items within the history of the resistance.

It is not difficult to put short videos on a videodisc and to then make an accompanying computer menu from which to choose these videos. The question was: How to organize 11,000 images and make it possible to choose among them in a meaningful way? We wanted to keep the system so simple that everyone without knowledge of such systems would be able to use it, since the target group were casual museum visitors. In this case we decided to register every single image without regard to its relation to other images. The fields in the database (seen by the user) were: a caption, two items, a date, two places and four descriptive key words. Since the captions were not to be used in searches, this gave us nine fields to search.

The situation is as follows: The visitor is attracted by the system and touches the data screen to start it (the user navigates through the system via a touch screen). The first choice is between films, photographs and artifacts, and leads to new menus. Within the photographs section, the system presents a menu of items and a map of Denmark, so that a certain region of the country can be pointed out. When the first photograph is displayed, the visitor can then browse through the collection of images associated with the selected item or region. Besides this, the nine searchable fields can also be used to search new collections of photographs. A combination of up to three fields is possible. In this sense, the system is a little complicated, and it is difficult to explain how it works. Because we didn't want to put a manual with it, we had to put all the information on the screen.

Once the system became part of the exhibition, it was kept under observation for some days in order to make sure that the system and equipment functioned as expected. After three months, a formalized evaluation was made. Since the resistance videodisc was the first one produced by a Danish museum, there were many questions, not only about the construction of the system, but also about the users. Our evaluation concentrated on four main themes:

- 1. Users and non-users. Which visitors used the system? Which ones didn't, and why not? (Age, sex, nationality).
- 2. Visitors use, as observed. Which part of the system was chosen? How much time was spent on each part, and on the system as a whole? etc.
- 3. The visitor's judgement. Comments made by visitors using the system were noted.
- 4. The system in relation to the permanent exhibition. Did the system steal attention from the exhibition, or did it function as a supplement and enhancement?

Within a 2-week period the formalized evaluation was carried out partly by observation, partly by interviews, and partly by questionnaires. Unfortunately, there is no logging built

into the system, which would have been quite helpful, especially for the second theme (visitors use). But the system is rather complicated and it would probably have occupied too much of the computer capacity to make a really differentiated logging anyway.

The first theme was investigated by means of questionnaires and interviews. One questionnaire was given to all visitors, in order to contact the non-users as well as the users. Among other things, the visitors were asked how long they had spent at the museum and if the interactive video system had been used. If the answer was negative, we asked why (fig 1).

We investigated the second theme primarily through observation. An extra data screen was placed at a distance from the system, so that the observer could watch how the system was navigated, which parts of it were used, and whether or not the visitors managed to understand the functions. One might fear that the visitors felt uncomfortable about being spied upon, but since all observed users were interviewed afterwards, we are certain that it was not a problem. The observer filled out a scheme during the observation, and afterwards conducted a brief interview asking for positive and negative opinions about the system. This interview, together with a questionnaire given only to those who had been observed and interviewed (fig 2.), formed the basis of the investigation.

It might seem redundant, observing, interviewing and distributing questionnaires concerning some of the same questions, but sometimes we found contradictions between what was observed and what visitors answered. One example that should be mentioned is an explanatory display which was placed near the system for a short time. Some visitors found this display "very instructive," though it had been observed that they actually hadn't read it! This reminds us to be careful when accepting answers uncritically - especially the polite ones.

The last theme, the relationship between the system and the exhibition, was elucidated by the statements on the questionnaires as compared to earlier studies of visitors to the Resistance Museum. The final results have been published in a report by the coordinator of the evaluation (Henrik Lundbak: *Sger! - og I skal finde*, 1990). The main conclusions are as follows:

Users and Non-users

One third of the museum's visitors did actually use the system, and another third would like to have used it if it hadn't been occupied. The rest hadn't noticed the system, hadn't had time or weren't interested in it. The users seemed to come from a broad section of visitors with variations in nationality, sex and age, except for a small bias shown toward the elderly public, as expected. It was also expected that children would occupy the system a good part of the time, and they did, one eighth of the time. Guards usually keep an eye on the system and prevent children from occupying it too long, but of course children are visitors as much as adults are, and must have access to the facilities of the museum like everybody else.

International Conference on Hypermedia & Interactivity in Museums

Visitor's Use

Visitors were observed to use the system for as long as half an hour, but half of them spent less than 5 minutes. The "serious" users would spend about 7 minutes, and the most popular choice was to look at films. However, if considered as one image database, photographs and artifacts attracted 2/3 of the users. It seems that most of the users actually did utilize the ability to make their own searches using the key words, although it was not explained on the screen.

On the other hand, only a few visitors got the idea to point out regions on the map. A built-in function makes the system return to the starting position when it has not been touched for a while, in order to facilitate the next visitor's use. The evaluation showed a significant difference between situations in which the user started from the starting position and those in which the user started from where another visitor had left it. The last situation caused many more difficulties.

Visitor's Judgement

Up to 80% of the visitors found the system easy to understand, informative and to some extent entertaining. We received some good suggestions in the free comments about ergonomic matters like screen size, having more than one system, having chairs, the sound level, etc. Some users, probably experienced computer users, had suggestions for the program such as smarter browse functions and possibilities for more specific searches. Such statements emphasize the difficulty in creating systems to satisfy experienced as well as inexperienced computer users. Since the latter group is still the largest, the systems should be adapted to them, at least as long as we are talking about exhibition systems. But in the future, visitors will probably be more critical and make more specific demands on interactive systems, following the growing use of information technology in museums and society in general.

The System in Relation to the Exhibition

A portion of the users appreciated the possibility of choosing information according to their own interests, and considered the system an alternative and supplement to the permanent exhibition.

One objection to using interactive systems in exhibitions, commonly voiced by the museum staff, is the fear that the technology will become the main attraction at the expense of the artifacts. Our evaluation has shown that the visitors who spend the most time at the system also spend the most time in the museum; however, not all of their time is spent at the system. The average length of a visit to the Resistance Museum is 40 minutes and since most of the visitors spent less than 10 minutes at the system we can conclude that it is used as it was intended to be used: as a supplement to the permanent exhibition.