Museums play an important role in the transmission of culture and traditions and provide a collective memory of a community. A number of museum related institutions, known as the Science Centra, have arisen to offer self-directed learning activities in problem solving and understanding the processes related to everyday life. In a modern society, it also necessary to learn to analyze critically information that the media provide. Museums and the Science Centra can be useful in this context as well and can offer students the opportunity to employ the media as learning tools. In recent years the "ecomuseum" also has arisen. An ecomuseum works to document the local heritage, to stimulate popular interest in that heritage, and to collect documentation of history. The ecomuseum model also provides a means of preserving indigenous languages and promoting their use and instruction. Cooperation among the various kinds of museums could help revitalize the cultural life of a community. At the same time, the cultural organizations can serve as catalysts of cooperation between schools and the broader community. This in turn can foster the view that cultural development is impossible without striking a balance between the natural environment and technical development and exploitation. (SG)
CONTRIBUTION OF EDUCATION TO CULTURAL DEVELOPMENT

"Cultural development through the interaction between education, the community and society at large"

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Cultural development through the interaction between education, the community and the society at large

Culture is by definition not innate - in order to survive and develop, traditions and "collective knowledge" have to be transmitted actively from generation to generation. In this process of transmission, the formal education in schools plays a fundamental role for learning basic skills such as literacy and numeracy, knowledge in history, natural history, language etc., which in a modern, industrialized society are all necessary for a full understanding, assimilation and development of our cultural heritage.

However, in many countries or populations, very little formal education is available, and even a written language may be lacking. In spite of this, they may have very highly developed cultural traditions, which have been transmitted through an informal education based upon oral traditions, participation and own experience. In such cultures, the cultural traditions are often very closely related to and dependent on their natural environment, and therefore, protection of their natural environment is fundamental to the protection and development of their cultural heritage.

However, even in countries with highly developed school systems, culture cannot be learned only from schools and formal education. School teachers and school organizations cannot be expected to have time and capacity to cover the cultural field and to arrange all the activities needed to reach this goal. Therefore, culture also has to be "assimilated" through contact with living cultural traditions, a "learning by participation". For this reason, it is essential to create living contacts between schools and cultural bodies in the community, independent of the formal education system. Modern libraries e.g., do not only offer books for loan, they very often house cultural activities such as meetings with authors, cultural debates, activities for children, small exhibitions etc. Theaters, concert halls, opera houses etc. can give programs for children, providing insight into the performing arts and thus attaining an understanding of the process of artistic creation.

Museums - educational resources with unique qualities

A very important role in the transmission of culture and traditions is that of museums. Museums serve as the collective memory of a community, a memory based upon collections of objects and documentation. Their traditional basic tasks have been to collect and to document, to preserve and to exhibit. In modern museums, extensive educational programs have been developed, based upon real
objects and using them for cultural education. Museums generally do
not only restrict their activities to their own local or regional culture
but also collect and exhibit objects for comparison with other
cultures. They often arrange exhibition exchange programs between
museums from different countries, and in this way they also have a
unique capacity of creating contacts and furthering understanding
between different countries and cultures.

As educational institutions, museums have a number of distinctive
features which make them a very unique educational resource of the
community. To mention some of them:

Museums do not ask for any formal competence of their visitors. There
is no formal demand for attendance, number of visits etc. Visitors can spend as long - or short - time as they want, and they
can select freely, according to their own taste and interest, what to
study. A museum is not an educational institution of "musts" - it is
an institution offering a wide selection of options.

As a medium, museums also possess many unique qualities.

Primarily, the museum has the *three-dimensional object*. Today, a lot of
information is distributed through books, newspapers, TV/video
which are all two-dimensional media. The encounter with the real-
size, three-dimensional object very often causes an experience which
creates quite another degree of understanding than has been the
result of reading or studying other media.

The fact that museums have the *original object* also plays a basic role.
All museum curators know the "magic" of the original, the object
which was really used by a historic person, which has been a part
of a dramatic event or a real animal of an exotic species etc. No
man-made copy or cast, however well made it may be, can replace
the original object. The information that the object is a copy does
inevitably result in a decrease in the experience and engagement of
the visitor. These special effects are also linked to another factor -
that in fact museum objects also have a *fourth dimension*: time. The
documented age of an object apparently adds an extra moment of
excitement to the whole experience in front of a museum object,
which cannot be evoked by any other medium.

The museum can also in its exhibits demonstrate and explain
procedure of cultural creativity such as the development through
ages of different forms of craft, artistic work, technical inventions
and innovations etc. These processes can easily be explained by
working items or models, and such working models can be activated
and handled by the visitor, thus creating a deeper understanding of
fundamental artistic or technical processes. Many museums also hire
artists and craftsmen for demonstrations and instruction of visitors.
The special characters of the exhibition as a medium should also be given a more thorough analysis. Besides the above mentioned characteristics linked to the special magic of the original, three-dimensional object, even a "flat" exhibition containing predominantly pictures and texts has proved to possess a lot of special qualities, making it different from other audio-visual media.

Reading a book is basically a "private" experience. Most readers of a book do not like other people e.g. standing behind them reading the same book and perhaps also making comments. Film, TV, theater, concerts etc., in spite of being social events are also to be considered private experiences - the show goes on, and making comments, starting a discussion etc. will not be appreciated by other visitors, viewers or listeners until the performance is ended. Museum exhibits have a capacity to evoke other reactions. An exhibition visitor can study texts, pictures or objects without being disturbed by others studying the same items. Even if other visitors make comments and perhaps point at texts or pictures, this will not cause irritation but instead very often can initiate a conversation or a discussion. The exhibition thus can be considered a more collective medium inspiring to cultural experiences together with other individuals.

These special characteristics of the museum exhibition have been observed and taken into consideration by museum planners during the last decades. The classical exhibition of selected objects still has a role to play as a reference framework and a place for more systematic, detailed studies, but museums have to increasing extent been changing their exhibition and education policy. School programs in museums are not only school lectures in another building, they are activating, aiming to inspire students to own activities and own exploration.

In order to make school contacts with the museum more than a school lecture in another building many measures can be taken. At first, the museum's own teachers should not be directly responsible for the class visiting a museum. The school teachers have to be involved in the visit as much as possible, and this can be attained through contacts between the museum and the schools well ahead of the visit to the museum. Educational material consisting of e.g. basic information and instructions about the theme and planning of the visit, slides, sound- and videocassettes for background information to the students, examples of questions which will be discussed during the visit etc. During the museum visit, the school teacher shall participate in activities such as group studies, experimental work, discussions etc. When leaving the museum, the class will be provided with a package for further work and study at school, following up the museum visit.
But museum school programs will not only be restricted to take place inside the museum buildings. In countries or regions where schoolchildren have difficulties to come to visit museums, several methods have been tried to establish other forms of continuous cooperation between museums and schools. Small educational units, so called "Kits", have been successfully used by many museums for this purpose. They are composed by a strictly limited selection of a few museum objects, related to a selected topic. To these objects, additional information is added, consisting of photos, texts, sound or videocassettes etc. They will also contain instructions to teachers about how to use them as well as working material for the children. The material will be packed into easily transported units which can be circulated to a great number of schools during a longer period.

As the system with "Kits" has proved to be successful, one should also try to develop similar "cultural packages" in other central institutions. Theaters could distribute videocassettes with theatre plays, accompanied by study material such as information about the author, texts, background of the play, perhaps some instructions to teachers how to arrange a play with children as actors etc. Corresponding production of material for regional studies and activities could also be undertaken by other cultural institutions such as concert halls, cultural centres, libraries, craft centres etc.

As teachers cannot be expected to be able to teach in all these different fields, it is essential that all distribution of material of this kind also includes background material and handling instructions for teachers. In this way, these circulating cultural packages will also act as a kind of in-service training of teachers. If resources are available, regular meetings or one-day courses for teachers could be arranged by the central institutions, where new educational material could be presented and methodological training could be undertaken.

Thus, using the unique combination of well-documented objects, the exhibition as a basic education resource and a scientific and educational staff in the same organization, museums have at increasing rate been able to establish a new kind of activity centers which will offer to the community a means to transmit and develop a wide range of cultural understanding and education outside the regular school system. Museums and other cultural institutions working in this way will also be able to act as centers for in-service education of teachers in fields where the school system itself cannot provide appropriate resources.

Science centra - a means to understanding

The development of new educational methods in museums has also been accompanied by the development of a number of museum-related institutions, the Science Centra. Free from the museum's duties to
collect, preserve and document, they have been concentrating their
efforts upon the development of the educational exhibition. Following
the pioneer work performed in Exploratorium in San Francisco, a
number of institutions of this kind have been built up all over the
world during the last few decades. The basic ideas of these
institutions are self-activity, solving of problems and understanding
of processes related to our every-day life. Used as a complement to
school lectures, these institutions can give the students an insight
into the scientific background of the technical and industrial
development in the community, providing demonstration material and
technical facilities which can never be acquired by schools. The
approach, policy and degree of scientific and technical complexity
can easily be adapted to the culture and the needs of the actual
population. Thus, the science center can offer a very substantial
contribution to the understanding of the social and cultural
developments of a society.

Understanding the media - learning critical examination

In a modern society with an abundance of information by a lot of
different media, an essential task for all kind of educators is to
increase the capacity of the students to critically analyze the
information which is brought to them by means of these media. Here,
institutions like museums and Science Centra have special
qualifications to participate. As an example, a project at the Swedish
Museum of Natural History may serve as an illustration to this.

In cooperation with a project group of the Swedish Television, a
project was formed with a multiple goal: to give children an insight
into some scientific research projects, to let them try to interview
scientists in order to find out the aims and the results of the
project, and to introduce them into the practical work of making a
short movie or TV-report referring to this project and its results.
The project selected was the research on the seals in the Baltic Sea,
threatened by extinction caused by pollution of their living habitat.

Scientists at the museum, involved in the research work were
interviewed by the children and these could also study and
participate in different moments of the project. At the same time,
they were taught how to make simple films by using different film
and TV technics. Finally, they made short films based upon their
experiences and could compare their results. Finding that almost all
of the groups had selected to stress different aspects of what they
all had experienced and described them from different points of
view, gave them a useful experience concerning the reliability of
media. A selection of the results of this project was also shown in a
program in the Swedish TV.
The resources in the form of scientists, educational material, documentation etc. available in many kinds of institutions in the society could in different ways be used to serve projects like this, serving the manyfold purpose to create insight in the media world and to learn more about essential fields in the life of our society.

**Ecomuseums - museums for integration and cultural participation**

During the 1970's, new aspects of museum work and museum planning were developed. As a result of the work of Georges-Henri Rivière, a new model of museum was developed, called "Ecomuseum". Rivière stressed the idea that a museum should not necessarily mean a certain building with collections and exhibitions. "Museum" could also be used as representing a decentralized organization working with documentation of the local or regional natural and cultural heritage, stimulating and engaging the population itself to find out as much as possible about their own area, to collect documentation of history, cultural traditions, industrial development, environmental changes etc. This kind of museum organization is served by a limited staff of trained museum curators, conservators and administrators, but the majority of the work will be performed by interested people from the society, forming working groups and committees for a number of special projects.

The results of this kind of museum activity may vary, but typically it will end up in a central organization running the administration, documentation facilities, economy and mostly also a central exhibition, prepared by the participants in the project. In addition to this center, smaller activity centers will be created, so-called "antennae". They are formed by working groups around some local point of interest, historical building, cultural activity center, craft center etc. The local group has worked together to collect the documentation, restore a building, reintroduce a traditional activity, organize demonstrations etc. The central body has supported them with professional advice and administrative and economic matters. This kind of museums has, during the last two decades, developed internationally and can now be found e.g. in France (where they were originally developed), Portugal, Canada, Brazil, Norway and Sweden.

Thus, the basic ideas of these museums are that they will be initiated and developed by a certain population or ethnic group and that they freely integrate topics which in traditional museums belong to separate institutions.

This kind of organization and working model will not necessarily end up in an "Ecomuseum". The process can also create a local "Cultural centre" for different traditional cultural activities such as music, dance, crafts etc., or an archive of the story of the development of the community or parts of it. Whatever the result may be called,
the basic concept in this kind of organization is participation, and by searching documentation and connections related to natural resources etc., they can contribute in a very essential way to the development of a cultural identity in a region.

**Language - a carrier of cultural heritage**

The "Ecomuseum model" has proved to be a useful way of creating cultural centres, "ecomuseums" or "neighbourhood museums" especially in developing countries and regions with indigenous minorities. An essential part of the cultural identity in such populations is the language. The language is a carrier of much of the cultural tradition. Literature, oral traditions, poems, songs and theatre originally created in the indigenous language will lose their value of cultural identity if they will be restricted to survive in an official or national language. But not only this kind of cultural heritage is depending on the original language - the whole terminology of everyday-life will contain concepts, ideas and substantial facts without any correspondence in other languages.

A good example of this was given during the work with the Sami museum in Jokkmokk, Sweden. When cataloguing objects from different Sami activities such as reindeer herding, nomadic life, religious concepts and phenomena in nature, the problems were that several varieties of Sami languages exist and that the Swedish language was quite insufficient for this purpose, lacking all the sensitive variations typical to a language developed as an integrated part of a very specialized culture. As a necessary base for this cultural documentation, a written list of the terminology connected with traditional Sami life is now under work. At the same time, the use of the Sami language has again been more and more widespread, and Sami schools and preparatory schools are increasing in number and size, teaching not only the language but also revitalizing basic Sami cultural traditions.

**Interaction between central and local cultural institutions**

Institutions or organizations described above represent a wide range of size, resources and areas of the society. Each of them can run their own activities with a certain result, but much more effects in the cultural life in a certain society could be attained if cooperation between institutions of different kinds could be developed. Large, central institutions which produce e.g. several temporary exhibitions, theater programs, or concerts can often rearrange these productions in a way which makes it possible to travel with them in the country or even internationally. Such travelling events can be received by the smaller institutions, vitalizing their program at the local level. If a thorough planning of these tours is made,
cooperation between schools and local organizers can be arranged in a way which can bring the local students into fruitful contacts with cultural and scientific areas which they do not normally have any possibility to reach. On the other hand - the contact with regional and local cultures and cultural bodies can enrich the central institutions by furnishing them with material and experiences which were not earlier known to them.

Cultural institutions as a catalyst of cooperation between schools and the community at large

In a community, very often numerous professional and non-profit organizations and institutions exist, dealing with e.g. cultural, scientific, social or environmental matters. Such organizations often run very qualified activities within their own fields, but they are not very often cooperating with each other or with schools. They are representing a wide "bank" of experience and knowledge in the cultural area, but these experiences are rarely taken care of by schools. In this situation, institutions like libraries, cultural centra, science centra, museums, theatres etc. could act as catalysts, initiating and organizing activities which can bring school children in contact with different kinds of cultural activities in the community. E.g., libraries can arrange presentations of literature on a certain topic with participation of authors and experts. Cultural centra, theatres, concert halls can invite school classes with their teachers to rehearsals and meetings with actors for discussions on content, form and ideas of a theater play, ending in visits to the final public performance.

Museums can arrange thematic exhibitions on a theme which relates to some artistic, cultural, environmental or youth organization. The exhibition and the activities related to it should be planned and performed in cooperation with the organization involved.

To all these kinds of activities, teachers and school children can be invited to participate in different activities such as the production of parts of the exhibition or programs, meetings with presentations made by professionals open to discussions and information, cooperation in documentation projects etc.

In this way, the arranging institutions will be able to use their capacities as media available to the whole community and their own expertise to take the initiative, to analyze the possible combinations of topics and organizations, and to find interesting and adequate methods of presenting the actual theme to visitors and participants. They will also have the capacity of producing educational material helping teachers to prepare and follow up the participation of school children in the program.
Integrating cultural and environmental activities

The cooperation between cultural institutions representing different topics can also contribute to a counter-balancing of the fragmentation of the cultural field which results from an increase in number and of a continuing specialization of institutions and organizations. In order to create an understanding of the complex interrelationships between on one hand technical, cultural and economic development, and on the other hand the problems and threats caused by environmental problems and overpopulation, an integration of different fields of knowledge is necessary.

A development project to this effect has been run in Sweden during the last three years, named "Spread of ecological knowledge". The basic goal of this project is to find out methods of integrating an ecological basic view into museums of cultural history, technology, folklore and ethnology. The idea is to illustrate the interdependence of cultural development and the use - or misuse - of natural resources. The interest for this project is increasing not only in Sweden but also in other Nordic countries. The final result expected is to increase the understanding of the fact that a cultural development in the long run is impossible without a balance between our natural environment and our level of technical development and exploitation.
1. Cultural institutions in the community form an important resource for education in cultural areas which cannot be covered by schools. However, schools and cultural institutions mostly belong to many widely different bodies in a community. Which measures can be taken to further contacts between schools and cultural institutions and organizations?

2. Teachers cannot be expected to be capable of teaching in a wide variety of cultural areas. How can systems be developed where cultural institutions can be used for different kinds of in-service training of teachers?

3. A strong potential for a decentralized cultural development can be found within the many new forms of local and regional museums, science centra, cultural centra, ecocentres, etc. How can communities support and further the development of this kind of cultural institutions, developed by local initiatives?

4. Museums, science centra, cultural centra etc., mainly using different forms of exhibitions as their basic medium, form a very special kind of educational tool. How can pedagogical research work upon the nature and effects of the exhibition as an educational medium be furthered?

5. Language is an integrated part of the cultural heritage and a carrier of culture. How can nations with indigenous minorities secure the survival of indigenous languages as a means to support the survival and development of such cultures?