

## A UNIQUE PLATFORM FOR SCIENCE AND CULTURE COMMUNICATION – THE MUSEUM

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### Abstract

Nowadays, with the development of science and technology, the ways by which science and culture are communicated are becoming more diverse than before and thus those for the public to acquire science and culture information are also increasing. Under such circumstances, is a museum still able to function as before, i.e. as a platform for communication of science and culture, and how? Here, we take Beijing Museum of Natural History as an example, and attempt to discuss how a museum can take its own advantages and still function as a useful platform for science and culture communication. We believe that a museum has its own advantages which can not be fully substituted by other ways such as publications, TV or internet. For instance, the museum has its own exhibition space, plenty of collections (exhibits and specimens) and multi-ethnic display methods, and the audience can see and even feel them on the spot. Therefore, a museum is still able to play its unique role in science communication if it can continue to improve its working ways and increase contents to meet the need for future development. This may be the reason that the audience to museums is steadily increasing, even though the ways of science communication have become more diverse.

**Key words:** Science and culture communication, Museum

### Diverse ways for science and culture communications

With the rapid development of science and technology, the dominant function of science knowledge and technology in people's daily life becomes more and more important. At the same time, people and government are paying more attention to the development of science knowledge and technology, which, in turn, improves the development of the ways and contents of science communication.

**Table 1** The number of visitors to Beijing Museum of Natural History from 1998 to 2005

Year	1998	2000	2002	2004	2005
Number of visitors	360,000	270,000	350,000	400,000	500,000

Nowadays, science communicators have paid much attention to the ways of science communication. The ways mainly includes all kinds of publications, television and internet, which have played an important role in and also made an important contribution to science communication. Museum is another way for science communication. Although museum visitors are still much less than those for publications, TV and internets, the museums have developed very rapidly in recent years. Take China as an example, the first museum in China, the Nantong Museum, was established about 100 years ago. Till 1980, more than 1000 museums have been established, and another 2300 museums was established in the following 20 years. These museums involve various subjects and fields, and are distributed mainly in

large and medium cities of China. The number of museum visitors has also gradually increased. Table 1 shows the statistic of the visitors to Beijing Museum of Natural History in recent years.

The increasing visitors indicate that the influence of museums is increasing. Note that this statistic comes only from one museum which does not have the most visitors per year in China. The number of visitors to China Science and Technology Museum, for instance, even reaches three millions per year. Therefore, for a country with more than a thousand museums such as in China, the total number of visitors is very large. So, the museums are an unsubstituted field for science communication..

### **Advantages of museums as a way for science and culture communications**

Regarding the concrete methods and the degrees of influences of science communication, the museum has its own characteristics. First, the museum has its own space and field, so it can use all kinds of methods and technology to facilitate science communication.

**Table 2** The concrete methods using by publication, TV, internet and Beijing Museum of Natural History

Communication method	Concrete methods
Publication	word, picture
TV	word, picture, video
Internet	word, picture, video, multimedia
Beijing Museum of Natural History	word, picture, video, multimedia, object (specimens, exhibits), direct communication face to face (lecture, explain, locale activity), interactive hand-on exhibits

In Table 2, we compare the concrete methods used by publication, TV, internet and Beijing Museum of Natural History. From Table 2, we can see that the technology and method used in the museums are more than those used in other communication media. The various, integrated display ways have many advantages. First, they can elucidate the science knowledge and technology more clearly and vividly; the uses of the concrete object, video and multimedia are more direct and expressive than simple word explaining. Second, they can attract more visitors. Third, it can adjust the visitors' feelings of nervousness and fatigue during the process of visit, study and communication, because these feelings are easy to form when visitors pay more attention to one thing for a long period, especially to the professional knowledge. This situation often increases the visitors' negative emotion for the information they want to know, and this, in turn, cannot reach the aim of the science communication. However, the museum can use all kinds of exhibits, colour and sound to relax the visitors and help them maintain an active attitude to science communication.

The use of these multi-ethnic display methods in museums also makes a different feeling and effect when visitors acquire information. With the help of the special sound and light, when facing the elaborately designed plates and exhibits, visitors will feel themselves to be personally on the scene. These feelings will inspire the visitors' interests to explore the unknown knowledge, and thus lead them to read further the explanations of the plates and observe the specimens and exhibits. Such feelings are more direct in museums as compared with other communication ways such as publications, TV and internets. The feelings will also facilitate the visitors to learn more scientific knowledge. Take the welcomed dinosaur as an example, only some pictures and the detailed descriptions of numbers are difficult for children to form a relative correct impression, while a skeleton can rapidly shape the dinosaur in the memory of children. Simultaneously, during the process of visit, some hand-on exhibits can mobilize the enthusiasm of visitors, induce them to take part in the process of science research, or experience some science experiments. All these methods can induce visitors to actively participate and think, and thus help them to understand the knowledge and skills.

Apart from the direct feelings on the exhibits, concrete objects and hand-on works, face-to-face activities are also

held in museums at present. Scientists make use of museums as a platform to directly explain their understandings on science knowledge and their attitude to science, as well as the application of new technology and new invention for visitors, which enables visitors to have a comprehensive understanding on science and technology. During the communication process, scientists may also receive some new information from the visitors, which may benefit their further research work. Although the museum does not hold so many activities so far, these activities are actually a quick and convenient way for scientists to be directly involved in science communication. So, many museums are actively developing this work. Furthermore, we still have many activities that visitors can directly participate in, which could improve their interests to science, induce interactive communication among visitors, and help them to share the experience for gaining new information.

As a platform of science communication, the museum has another advantage, i.e., authority. In recent years, the media, such as newspapers and internet, sometimes enlarge or distort the achievement of scientific research to seek the so-called news effect, because the reporters or editors do not have the corresponding knowledge and thus do not really understand the research. This phenomenon reduces the authority of media and also the degree of faith from people, which, in turn, influences science communication. However, the authority of museums is not influenced all along. This phenomenon is thought to be related to the working mode of science communication in museum. Since the establishment of museums, there are professional researchers to work and conduct research in different fields or on different subjects. The exhibition design and the activity organization are all confirmed by the staff with corresponding professional knowledge. In addition, museums have their respective research institutes and also plenty of collections to sustain the communication work. The vivid characters of exhibitions in museums are closely related to the collections and researches. Sometimes, the collections of a museum will decide its research direction. The combination of abundant collections and assiduous research can result in the establishment of a good exhibition. After so many years, such general working model maintained in museums erects the science authority among museum visitors.

Science communication requires not only a wide range of influences, but also a deep one. All these advantages of museums improve the efficiency of science communication and help visitors understand and learn more science. These advantages also attract more and more visitors to museums, though many other manners of science communication can be selected to satisfy the curiosity of visitors for science and to answer their doubts about scientific questions.

## Concluding remarks

The progress of science and technology actually brings new challenges to museums. Museums should not only make full use of their own advantages, but also absorb more ideas and technology of other media to enhance their ability of science communication. The need from visitors is the reason for the existence and development of museums. So, we believe that museums have the ability to conform to the social development trend and to play an important role in science communication.

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