

FROM VISITING TO PARTICIPATION

---“DISCOVERY WORLD” IN BEIJING MUSEUM OF NATURAL HISTORY

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ABSTRACT

Beijing Museum of Natural History constructed and opened the Discovery World in 2003, a place where youth visitors' participation and interaction are emphasized. With the purpose to broadcast knowledge of natural sciences, our researchers and organizers lead the youth to carry out kinds of activities to make them discover and ponder initiatively. This pattern is to expand the contents and formations to popularize science within museum. The Discovery World conforms to the youth visitors' psychological needs of understanding and learning, meanwhile, it attains the support and participation from the researchers.

KEYWORDS

Participation, Beijing Museum of Natural History, Science Popularization, Science Education

PREAMBLE

Beijing Museum of Natural History, the only one of its kind in Beijing City, is one of the well-known museums of natural history in China. The annual visit is about 400 thousand, 70 percent of whom are teenagers. They are the main object of science popularization and science education for our museum. The function of science popularization of a museum is mainly implemented through exhibitions or displays. To this traditional way, visitors can only stand still and watch. Nowadays, this unidirectional, simple way to obtain information has been unable to satisfy the demand of social visitors, especially the youth. They urgently need a new way to obtain information, the way that should be easy-to-be-accepted, multidirectional and diverse in channels and forms as well as adapted to the development of modern social civilization.

Under this situation, our museum opened an activity place for visitors' participation. Here, visitors may focus certain subject to carry out experiment, discussion and activities. By means of

experimenting and researching, they could obtain scientific knowledge and also promote their experimenting and participating capability. Meanwhile, involvement into such activities may help visitors to better understand scientific process, methods and spirit. We named this project and this activity place “Discovery World”. As a key project of the museum, the fundamental construction of it has been finished at the end of 2004 with the financial support from Beijing Municipal Government. Today, being supervised by full-time personnel, it has become a place that permanently opens to the visitors.

At present, three problems exist in the construction and operation of the discovery world, they are 1) to establish the guiding ideology, 2) to design the detailed plan and 3) how to make researchers willing to participate into this work.

THE PROCESS OF SCIENCE COMMUNICATION

Having explored the development of science communication of museums home and abroad and researched youth’s psychological characteristics through learning process, the guiding ideology of Discovery World has been fixed as followed: Discovery World should be a place where teenagers could explore and learn together. The activities here are extension and expansion of the exhibitions in the content and formation. The subjects take the initiative research and ponder as its starting point and allow teenagers who participated to be the main part while the working staff just plays the guiding and auxiliary role in this interactive education process. Taking the task of communicating scientific knowledge and promoting the development of personal capability as its core, we hold experiments and discussion based on small topics to help youth research and discover the rules and obtain scientific knowledge, thus gradually make them understand science and promote its development. “I see, I forget; I hear, I remember; I do, I understand.” Participation is the better form.

Through the research into the curriculum design in education reform combining with the characteristics of museum visitors, the activity scheme of Discovery World is designed as followed:

Activity Name:

Activity Goal:

Activity Content:

Activity Method:

Material Needed in the Activity:

Date to Hold the Activity: (Some materials like specimens may be alternative to the season)

The Time Duration of Activity: (30-40 minutes are generally suggested)

The Process of Activity:

The Guiding Teacher:

The Auxiliary Teacher:

The Suitable Age range:

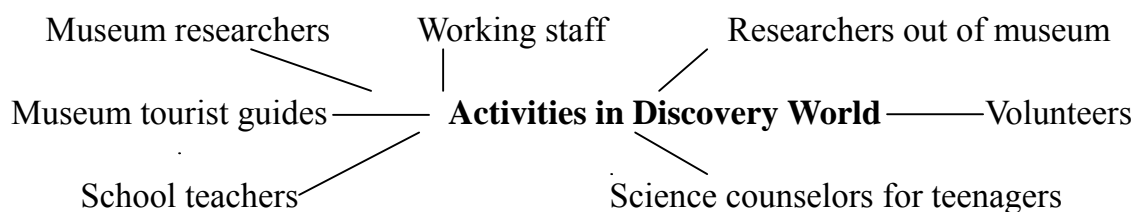
The Suitable Number of Participators:

The construction and operation of Discovery World made researchers and those relative ones in the museum to review science communication. The research staff emphasizing on scientific research but neglecting science communication is a universal phenomenon. Therefore, to operate the Discovery World acquires the understanding and support from those professionals within the museum. To solve this problem adopted the following process:

1. To understand the ideas of those who involved in the design and manufacture of exhibitions. We have chosen four young researchers who are engaged in science research and communicated with them to know their opinions to the exhibition and found out the success and deficiency in the exhibitions.
2. To understand the ideas of tourist guides who are working at the gallery. To discuss with them the attitudes visitors hold to the exhibitions and how they comment on the exhibition from their angle and whether there exist some problems in the exhibitions.
3. To combine the above two opinions and discuss with those four young researchers (They are engaged in zoology and paleontology respectively). To propose the detailed work that the Discovery World should do as well as its guiding ideology and working modes. After getting these professionals' understanding and support, we ask them to make out a scheme according to the requirements of design.
4. To take their design as blue print and organize relative staff including director and researchers in charge of science popularization, professionals in various subjects, tourist guides to simulate the activities, and then hold discussion focusing on design ideology and concrete methods to analyze the advantages and disadvantages of each activity.
5. To make the involved researchers understand problems existed in exhibitions, demand of visitors, as well as changes that participation brings to the concept and methods of science communication within museums. Through the above practical work, researchers may further realize the importance of science communication and may pay more attention to the development of science communication within museum; therefore they may become more willing to participate into this work.

We have two professional with Master degrees and biological learning experiences from normal universities to be responsible for cooperating with professional experts home and abroad to enrich the contents and improve the level of research at the Discovery World besides their responsibility of designing and organizing activities. Moreover, six other tourist guides are also assisting for detailed

work. The staff participated or will participate into this project are:



The following schema describes the process through which each of activities should undergo to become a mature one.

Initial draft made by relative staff → discussion with working staff → second version → discussion with activity conductors and professionals of relative fields → third version → trial within the museum → communication with participators → discussion on the feedbacks → final version → a long-term activity of Beijing Natural History Museum

CONCLUSION

Discovery World has not only won applaus from teenagers and their parents, but also harvested praises and supports from museum counterparts since it came into being 2 years ago. Compared with traditional museum exhibiting ways, this visitor's participation has its own strengths as below:

1. In accordance with features of teenagers' cognition, easy to be accepted and understood.
2. Helping teenagers with better understanding of science knowledge and spirit
3. Promoting the development of individual capability by teenagers' participation
4. Expanding the function and formation of science communication and education
5. Exploring the potentiality of museums in science communication and education
6. Establishing a platform on which teenagers can communicate directly with professionals in science research and education

DISCUSSION

1. Most of researcher in our museum has participated into exhibition designing, so it is easy for them to understand the practical importance and detailed work of science communication. They may come into common understanding with us after several discussions and participate initiatively into this work. To those who have no such working experience, however, it is hard to transform the concept and further exploration and research are needed here.
2. The standard to comment the projects is also a problem worth further research. This project has gained applaus and support from our leaders and visitors, but how to use "quality" and

“quantity” to comment it needs further research.

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