

Which category of environmental art education pictures attract visitors in botanical garden most?

Ling Xu¹, Jin Chen²

1 Graduate University of Chinese Academy of Sciences, Beijing, P. R. China

2 Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences

Abstract

This study examined Sound of Nature, an exhibit of Art and Environmental Education pictures at Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, Yunnan province, China. There are three categories of pictures in this exhibit, including symbolic works, pristine nature (depict niceness and beauty in the nature) and environmental degradation works (depict environment destroyed by human beings). The aim of study is exploring which category of art and environmental education pictures attract visitors most. Another hypothesis is that environmental art education pictures exhibit can create a unity among different cultures in environmental awareness and responsibility. Both of behavioral observation and interview were used to test the effectiveness. The practices and findings from the study may significantly contribute to the discussion on methodological aspects in the public education of botanical gardens in general.



I am responsible for evaluation and to be an interpreter at the same time

Introduction

Gardner has identified at least eight types of intelligences: linguistic, logical/mathematical, bodily/kinesthetic, musical, spatial (visual), interpersonal (the ability to understand others), intrapersonal (the ability to understand oneself), and naturalist (the ability to recognize fine distinctions and patterns in the natural world). And he said he is considering a ninth – existential (from: <http://www.weac.org/aboutwea/conven97/gardner2.htm>). The theory of multiple intelligences also has strong implications for adult learning and development. Through the environmental art education pictures, we can observe the law in the natural world (naturalist) or in the human world of commerce (interpersonal).

Hypothesis

1. Different categories of environmental art education pictures have different effectiveness for raising global awareness of environmental problems.

2. Environmental art exhibitions can create a unity among different cultures in environmental awareness and responsibility.

Methodology

Study Site

An environmental art education exhibit named *Sound of Nature* was conducted in Xishuangbanna Tropical

Botanical Garden (XTBG), Chinese Academy of Sciences, Yunnan Province, southern China. About 10,000 species of tropical and subtropical plants from China and abroad flourish here. In its capacity of promoting public science education and providing first-class nature tourism, XTBG attracts about 500,000 visitors each year.



A local monk visiting the exhibition

Intervention (Treatment)

There are three categories of environmental art education pictures in this exhibit.

- Symbolic – pictures of art works designed by artists, they use special material to express their ideas. The works are artificial and you can't see them in the natural world.
- Pristine nature (natural active) – pictures that depicting niceness and beauty in the nature. They are not destroyed by human beings.
- Environmental degradation (natural negative) – pictures that depicting environment destroyed by human beings. They are not beautiful but can stimulate the audience.

Data collection and analysis

Quantitative Data: Behavioral observation

Five samples were selected from each category, noting attraction power and holding power during the same time everyday for 10 days, in order to compare the mean differences of Attracting Power and Holding Power among three categories.

- Attracting Power-- how many people view each work sample
- Holding Power-- how long they linger before each work sample
- demography of visitors

Qualitative Data: Interview

At exhibit exit, the facilitators interviewed visitors and brought their ideas together for focused discussion. They agreed upon common themes that emerged from the qualitative data. The questions they asked when interviewing are below.

- 1) Compared with exhibits you have visited before, does this exhibit illuminate any special or new ideas?
- 2) What message of the exhibit was conveyed to you?
- 3) Which pieces have given you the most lasting impression?
- 4) Do you have any advice to help us improve the exhibit in the future?
- 5) Please leave your e-mail address to get more exhibit information in the future.

Main results

All statistical analyses (set the significance level at 0.05) done using SPSS 13.0.

Quantitative data**Attracting Power (R*C chi-square test)**

School children at the exhibition

For Attracting Power, no differences were found between works I and II ($P=0.399$), but significant differences were found between works I and III ($P<0.01$), and between works II and III ($P<0.01$). The Attracting Power of works III is much stronger than works I and II.

Holding Power (One-way ANOVA test)

For Holding Power, no differences were found between works I and II, but significant differences were found between works I and III ($P<0.01$), and between works II and III ($P<0.01$). The Holding Power of works III is much stronger than works I and II.

In conclusion, both of Attracting Power and Holding Power of works III (pictures that depicting environmental degradation) are much stronger than works I (symbolic) and works II (pristine nature).

Environmental art education design is still in its infancy and suffers from a lack of competent researchers. However, practitioners do not suffer from a lack of enthusiasm and it is expected that improved education and training will continue to develop. Despite the limitations, there are a number of empirical principles that seem to have generality across exhibit and visitors. It is difficult to predict the degree to which these principles will be able to guide environmental art education design. At worst, they provide a set of heuristics which, combined with front-end, formative, and remedial evaluation can greatly improve the chances of success.

Implications for future practice and study

- Provocative exhibits tend to stimulate discussion and pointing of visitors come in groups.
- We should preserve out multiculturalism by embracing art that represents unique ethnic viewpoints.
- Use of various methods of evaluation to form sophisticated evaluation systems.
- Visitor variables play an important role in visitation. For example, demographics and leisure values. As one might suspect, age, gender, educational level are important variables in understanding the exhibit.
- More research on the effectiveness of environmental art education programs is needed.



Exhibition room

Images used

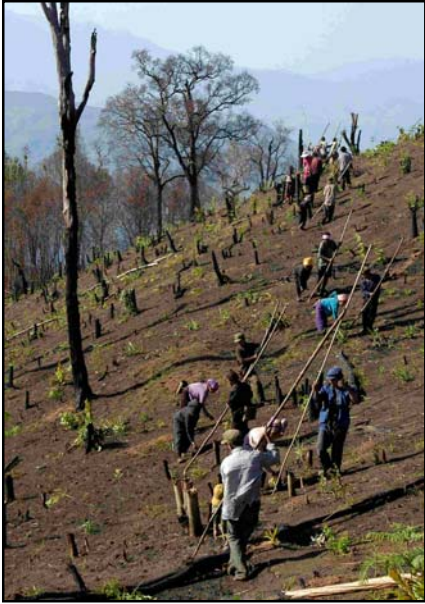
1) Symbolic



2) Pristine Nature



3) Environmental Degradation



4) Environmental Degradation

