

# **Interactive Support for Art Appreciation Through Touch: Based on a Viewpoint of the Sculptor**

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## **ABSTRACT**

In general, Art and Design is intended to be mainly appreciated in the vision, and there is almost no opportunity for the viewer to touch the work. However, from the author's experience of support for art appreciation it is inferred that tactile sense contributes to the understanding of the work.

This research aims to explore the method of interactive support for art appreciation through touch from a viewpoint of sculptor based on an experiment of sculpture appreciation for the visually impaired. In the experiment, 40 people with visual impairment participated, and compared viewing without support to appreciation accompanied by interactive support. The interactive support was carried out by a method based on the viewpoint of the experience of the first author's sculpture production.

Haptic viewing makes it difficult to grasp the whole figure as compared with visual appreciation, so it takes time. In addition, in viewing alone, there were scenes where subjects were unable to solve the uncertain factors about the statue and could not proceed with appreciation, and cases where grasping of the object became the goal of appreciation. However, with interactive support, there were some utterances that means not only the physical characteristics of works but also the creative images. As a result of the appreciation experiment of this research, it was confirmed that appreciation based on tactile sense is sufficiently meaningful in viewing with appropriate support.

## **1. INTRODUCTION**

In visually impaired education, tactile observation is called "Syokusatsu" in Japanese, and it is important to nurture students' ability to touch up. In some cases, "Syokusatsu" is expressed as "Seeing with Hand", and non-visual images are formed by actively moving both hands and repeating the observation of the whole and parts. Handling of arts and crafts and art education in the special support school is in accordance with the curriculum guidelines of the normal school, students are also carried out creative activities in daily lessons. However, opportunities for art appreciation activities are limited, and in general visually impaired people's viewing experience is not sufficient compared to sighted people.

Authors have been engaged in production of sculptures conscious of materials and tactile sensations, and practice of support for art appreciation through touch mainly by visually impaired people. Through these activities, we came up with the hypothesis that "accumulation of tactile experiences will contribute to improving the ability to see art works." In order to deepen the consideration to this hypothesis, we aimed to show one direction about the way of interactive support in tactile art appreciation based on a viewpoint of sculptor.

And we also believe that this research can also contribute to improving the environment of art appreciation for visually impaired people in the future.

## 2. METHOD

Sculpture appreciation experiments were conducted from January to March in 2012. In the experiment. The First Author gave support to each viewer during their second phase of appreciation and the Second Author was in charge of the designing and managing whole experiments.

In the experiment of appreciation, 40 people with visual impairment gained cooperation. And we practiced sculpture appreciation by subject alone and interactive viewing with supporter, and conducted comparative analysis. We prepared three sculptures for viewing and recorded the images of subjects' viewing about each work. Then, we analyzed the movement of the subjects at the time of appreciation and analyzed utterance protocols.

In support of interactive viewing, the first author came to support with particular attention to the following three points.

- viewer's pace
- viewer's level
- Avoidance of words that directly indicate answers

The above is based on experience as a sculptor, and it is conscious of differentiation from the audio guide by the fixed form explanation. The viewing experiment was conducted in the flow shown in Figure 1.

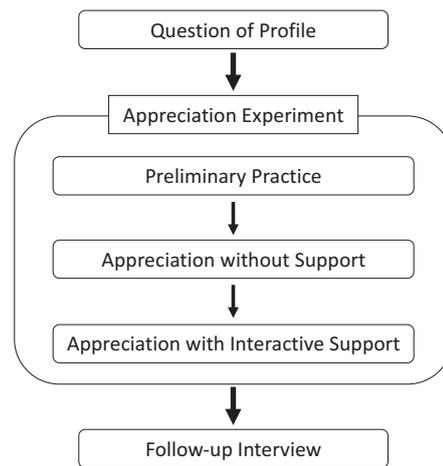


Figure 1: Flowchart of the Experiment

### 2.1 Sample Preparation

Visually impaired people who participated in the experiment were 40 male and female from 16 years old to 67 years old, and the average age was 27.2 years. More than half of the subjects experienced art appreciation through touch less than 5 times.

As works to appreciate, we prepared three bronze sculptures (Figure 2-A, B, C). All the works are subjects of animals, each size can be hugged and it is a size suitable for viewing by touch. The creators of works A, B and C are Chozan Sato, Saburo Yoshida, the First Author, and Sato and Yoshida are historically acclaimed sculptors. On the other hand, the sculpture of the first author is a work exhibited at the 39th NICCHOTEN EXHIBITION, that is, each sculpture work can be evaluated as having certain artistic value. Each work has its character in its expression, and although these works were casted in bronze, the prototype work was made of different materials. "Hogyu" is Wood Carving, "Hidamari" is Modeling, "Waiting Wind" is made by Plaster-direct-attachment, and the bronze surface can see the difference in each texture.



Figure 2-A:  
Chozan Sato, 1926, Hogyu



Figure 2-B:  
Saburo Yoshida, 1951, Hidamari



Figure 2-C:  
Shinji Miyasaka, 2009, Waiting Wind

## 2.2 Experimental Procedure

The authors investigated the experiences of subjects' appreciation and degree of disability in advance question papers. Then next, we conducted three stage viewing practices, and followed-up interviewed the subjects after viewing. Appreciation practice was conducted in a form in which subjects uttered what they felt or thought during appreciation, and we recorded the situation with images. The timing to finish the appreciation was left to the subject. In Preliminary practice, we prepared a sculpture made of wood with a giraffe as a motif and carried out a preliminary exercise of subject's utterance. After that, sculpture appreciations without support were done for three works (Figure2-A, B, C). Supporter (the First Author) observed the state that subjects, assumed the level of appreciation from hand movement and utterance situation, and planned for appropriate interactive support. After the subjects finished appreciating themselves, Interactive viewing accompanied by supporters at the same works, was done.

This experiment was conducted based on the ethical review of the Graduate School of Comprehensive Human Sciences, University of Tsukuba. The Application of ethical review was submitted by Professor Hiroshi Dairoku and Kozeu Handa (the Second Author).

## 3. RESULTS AND DISCUSSION

It was confirmed by observation that the non-visual touching appreciation tended to flow as follows (Figure3-1,2,3,4,5).

1. Exploring the outline of the image and grasping the scale of the work
2. Grasping physical characteristics such as hardness and weight
3. Focusing on characteristic forms, and seeking motif of statue
4. Forecasting on composition of the work, and Understanding the overall
5. Focusing on distinctive art expression, and seeking expression intent

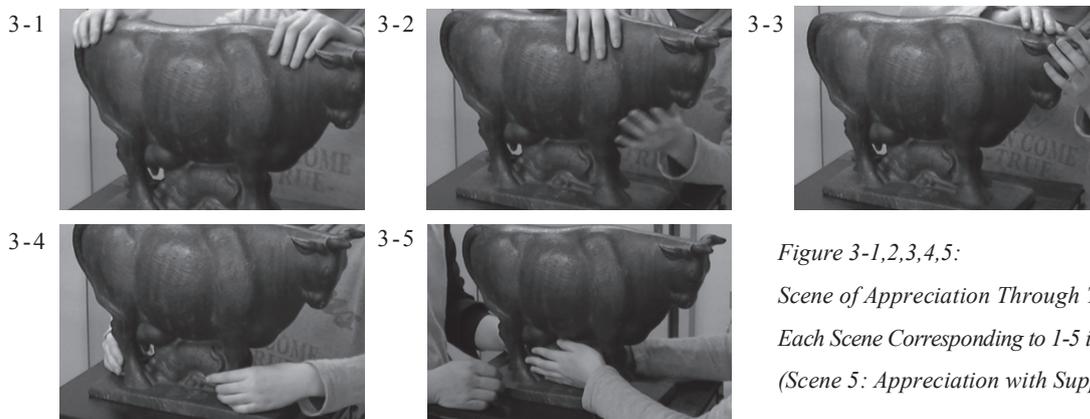


Figure 3-1,2,3,4,5:  
*Scene of Appreciation Through Touch,  
Each Scene Corresponding to 1-5 in the Text  
(Scene 5: Appreciation with Support)*

Subjects tended to satisfy and finish appreciation by recognizing what is represented as a motif or by understanding of the overall. It was the main purpose to appreciate viewing by themselves, and there were a few utterances leading to expression intention. The following elements were used as clues in planning.

- Frequency of appearance of surface perceptions (texture) in utterance
- Frequency of appearance of aesthetic sensations and art images in utterance
- Emotional ups and downs appearing in the facial expression and voice tones
- Changes in the speed of motion of hands and fingers
- Length of time to think at specific points with hands stopping

The length of viewing time with supporter was longer than without supporter in any of the works (Table 1). In addition, according to the follow-up interview, it was confirmed that most subjects felt that art appreciation was deepened by Interactive Support.

In viewing with interactive support, there were some utterances that means not only the physical characteristics of works but also the creative images. It was possible to consider that it is more advanced viewing. It was revealed that regarding the way of support, making viewers independent appreciation is the most important than providing knowledge and information. And also, it was suggested that there is recognition that can only be obtained within the process of tactile appreciation.

Table 1: Outline of Experiment

Total number of subjects			40
Sex			M: 16, F: 24
Appreciation experience 5 or more			17
			Average
Age			27.2
Time for viewing	without support	1 - A	07 : 15
		1 - B	06 : 30
		1 - C	05 : 58
	with interactive support	2 - A	12 : 37
		2 - B	09 : 07
		2 - C	07 : 48

#### 4. CONCLUSIONS

Appreciation should be done as well so that the creative activities are done self-directed and actively. Therefore, it is effective to try interactive support not only explains the appearance of the work but also empathizes with the viewer as the viewing progresses, conveys visual information that is difficult for the viewer alone to grasp, and tries a dialogue to obtain a multifaceted image.

Through this experiment, it became clear that in art appreciation through touch for the visually impaired, the interactive support will be a certain benefit of the viewer. In addition, it was able to confirm that they wanted support to clear only ambiguous places in their own viewing rather than the fixed form guide.

In the current situation in Japan, it is hard to say that the viewing environment is still well prepared, and training of supporters is a future task. We think that considering tactile appreciation not only as a viewing support for the visually impaired, but also a new viewpoint of art appreciation education.

#### ACKNOWLEDGEMENTS

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