

Development of Communication Tool for Participatory Design Workshop for Architecture/ Urban Design

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ABSTRACT

In many cases participatory design workshops in architectural/ urban design are conducted based on the assumption that all the participants can share the common natural language on the same level. This writing illustrates the difference between text-based communication and sketch based communication in architecture/urban design process. The method for the experiment is Brain Writing and the Brain Writing is evaluated by coding and its comparison. The result shows that there are clear differences between text-based communication and sketch-based communication. Text-based communication can share the process of thinking more than sketch-based communication does, whereas sketch-based communication can illustrate the result of thinking more than text-based communication does.

Author Keywords

Brain Writing; space design; text and image: natural languages.

INTRODUCTION

In many cases participatory design methods have only been developed based on the assumption that all the participants can share the common natural language. In fact, it has been rare in Japan to see foreigners attending participatory design workshops for urban design. However, there are residential areas where conflicts happen between existing Japanese residents and foreign residents as newcomers due to the cultural difference, and this can be seen more frequently in

the future, given the fact that the number of migrants are increasing dramatically these years. This implies that there is a need of the new workshop method that allows people who do not speak the common natural language to communicate with each other to share problems and ideas to improve their living environment.

To create the new workshop method that enables participants who do not speak the common natural language amongst them, alternative communication tools without natural languages, such as drawings or body languages, are sought. In this writing, I will report the result of the experiment that evaluates the possibility of drawings as a communication tool in the participatory design workshops. The experiment adopts Brain Writing (BW) in order to compare the communication capability between natural languages and drawings. BW is used in the student project that designs the architecture and landscape in a residential area.

Brain Writing

Brain writing (BW) is also known as “silent brain storming.” Each participant writes or draw their ideas to the paper that has three columns and three rows, namely 9 ideas on a paper. Normally, BW is done by 6 people and it generates 54 ideas in a short time, but the number of the participants, columns and rows are adjustable depending on the purpose. First of all, participants make a circle and each participant fills out the first column in a decided time. Next, they give the paper to the participant sitting on the right side. Then they fill out the second column and hand the paper to the right. When the third column is filled out by the third person, the brain writing is finished. The ideas filled in cells are influenced by other ideas on the paper, and this can be seen that the participants communicate through the paper (Figure 1).

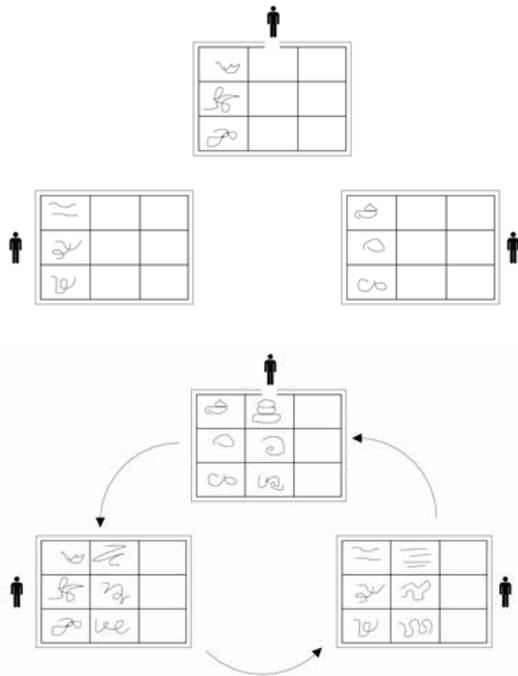


Figure 1. Process of Brain Writing

METHOD

Using BW, the experiment evaluates the difference of the communication between natural languages and drawings. In the experiment the participants are divided into 2 groups: group A writes texts and group B draws sketches in BW. The theme of the BW is the first image sharing of future architectural design, right after the first fieldwork at the project site. During BW participants are announced to avoid speaking so the BW is the only communication tool among the group members. Figure 2 shows the samples of BW work.

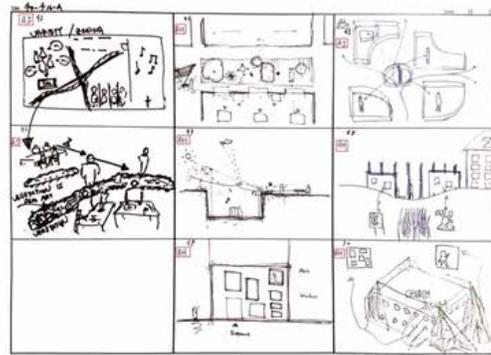
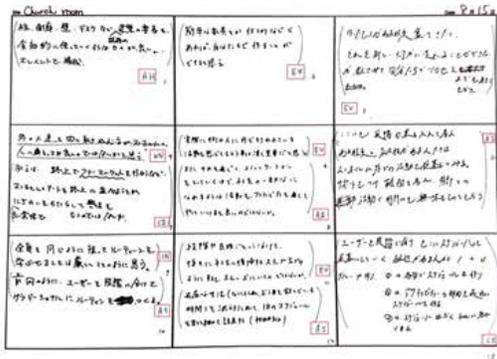


Figure 2. Samples of Brain Writing work. Above is text-based communication and below is sketch-based communication.

ANALYSIS

Code	Name	Detail
KN	Knowledge	Information based on fieldworks or interviews.
IN	Inference	Assumptions developed from KN.
EV	Evaluation	Reactions to the other information on the paper.
AH	Abstract Hardware	Abstract proposal for hardware design
AS	Abstract Software	Abstract proposal for software design
CH	Concrete Hardware	Concrete proposal for hardware design
CS	Concrete Software	Concrete proposal for software design

Table 1. Types of codes to analyse Brain Writing.

Code	Text-based	Sketch-based
KN	9	0
IN	11	0
EV	28	2
AH	20	14
AS	15	23
CH	2	0
CS	0	0
EV AH	1	6
EV AH AS	0	1
EV AS	1	1
EV CH	0	3
AH AH	3	0
Total	90	50

Table 2. Comparison between text-based communication and sketch-based communication in terms of the types and amount of codes.

Gathering BW papers, the difference between text-based communication and sketch-based communication is analysed. The method of analysis is coding, which applies different types of codes to the texts and sketches, depending on the type of information illustrated on the paper. The types of codes are shown in Table 1.

The result shows the differences between text-based communication and sketch-based communication in terms of the types and amount of information communicated. The process of thinking, such as KW, IN and EV are more shared in text-based communication than sketch-based communication. On the other hand, sketch-based communication can easily share the result of the thinking, such as AH, AS compared to text-based communication.