

## THE ROLE OF VERBAL COMMUNICATION IN DESIGN STUDIO

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**Abstract.** Based on a previous study on crits process, this study explored the verbal communication in design studio by protocol analysis in order to understand the role of verbal communication in the crits process and to discuss the pedagogical implication of visual reasoning theory.

### 1. Purpose

In design education, the main framework of teaching new designers is the use of design studio. One-on-one discussion between a tutor and students enables the student to learn about designing during the crits process. From a previous research (Goldschmidt, 2002), it was found that there was a high percentage of misunderstanding in the protocol of verbal conversation between the teacher and student, and such gap left an interesting problem for this study to pursuit. Based on visual reasoning theory, there were different aspects of designing, including at least visual interactions with sketches and conceptual reasoning of design problems. Communication revealed by protocol might only exhibit certain aspects of the crits process. This study intended to study the verbal communication in design studio by protocol analysis in order to understand the role of verbal communication in the crits process and to discuss the pedagogical implication of visual reasoning theory.

### 2. Method

The studying methods includes participatory observation, interview, questionnaires, and protocol analysis, while the essential results came from the protocol comparisons of the mutual understanding of the conversations between the student and the tutor in crits. The experimental design studio was a basic products design studio in Industrial Design Department, Chang Gung University, Taiwan. 30 students and the course director and tutor participated for a semester. Studio conversations between different students

and the same tutor were analyzed by comparing their understanding of each other individually. The students and the tutor were requested to mark the important sentences from the conversation protocols. The sentences marked by both the student and the tutor indicated mutual understanding. The percentages of mutual understanding of the conversations of different students were compared.

### 3. Results

Participatory observation showed every individual encountered different situations and problems, and it was hard to describe what the tutor taught and what the students learnt in general. From interviews and questionnaires, we found that the design problems for different students were situated, reflecting their situations and approaches to design. However, the understanding of the project direction and requirements was similar.

18 sets of protocol comparisons provided four different percentages information, including: 1. Mutual understanding: percentage of important sentences regarded by both the tutor and the student. 2. Percentage of important sentences regarded by only the tutor. 3. Percentage of important sentences regarded by only the student. 4. Others: percentage of important sentences regarded neither by the tutor nor the student.

The results showed the follows. First, for half the students, the level of mutual understanding was related to the final scores of the project. Better the communication, higher the score. Second, the percentage of mutual understanding was very low, ranging from 23 to 5 percent. The communication in the crits process was not good in terms of verbal protocol comparison. One of the possible reasons was the students tended to regard their utterances unimportant in the marking process. Third, the percentage of others was very high.

Finally, we discussed the results from the perspective of visual reasoning. Since the protocol only revealed the process-oriented aspects of the communication, what missing was the content-oriented aspects emphasized by visual reasoning. Designing is a process using both perceptual and conceptual abilities. Therefore, to analyze crits should include its multiple modes. Future study could focus on the perceiving, sketching, and modeling in the crits process from visual reasoning perspectives.

### References

- Goldschmidt, G: 2002, "One-on-One": a pedagogic base for design instruction in the studio. *in* D Durling and J Shackleton (eds.), Design Research Society International Conference. UK, 1-9.