

Title	プレイが個人間のインタラクション行為とアイデア生成を促進する要因の分析
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Abstract

The topic of this study is the play activity involving modeling with LEGO bricks. Specifically, this study empirically investigated the effect of play activity on interpersonal interaction during the creation of new ideas. This study identifies two types of play activity: a make-first play and a think-first play. The former refers to intuitive modeling. The latter refers to the modeling activity after thinking. This study aims to find out the difference in the effect on interpersonal interaction between two types of play. It is hypothesized that the make-first play would have a positive effect on interpersonal interaction larger than the think-first play.

Specifically, this study operationally defined two types of play in empirical experiment and evaluated interpersonal interactions by explanatory conversations. Pairs of participants were recruited in a creative task, in which they were asked to make creative proposals about the laboratory in the future by modeling with LEGO bricks. Participants firstly went through an individual phase and then a cooperation phase. In the individual phase, they could not see each other and worked separately. In the cooperation phase, the paired participants worked together. Participants were grouped according to the type of play involved in the individual phase. Group M was engaged in the make-first play, i.e., the participants firstly made models by intuition and then wrote down the concepts. Group T was engaged in the think-first play, i.e., the participants firstly thought and wrote down the concepts, and then make models. Conversations among the paired participants during the cooperation phase were coded into four categories: explanatory conversations, operational conversations, questioning/affirmations, and others. The number of conversations of each type was count and statistically compared between different groups of participants.

It is found that the Group M had significantly more explanatory conversations and questioning/affirmations than the Group T. Explanatory conversations were further divided into two sub-types: the abstract explanatory conversations about the concept, and the concrete explanatory conversations about the model. A statistically significant difference between two groups had been found in the abstract explanatory conversations, but not in the concrete explanatory conversations.

The results support the hypothesis that the make-first play has a larger effect than the think-first play on interpersonal interaction. In particular, make-first play positively affects the number of abstract explanatory conversations about concepts, rather than the concrete explanatory conversations about the model. In addition, it is possible that questioning and affirmations increase interpersonal interactions, especially the abstract explanatory conversations about concepts.

This study provides empirical evidence that make-first play, as involved in the intuitive modeling with LEGO bricks, could facilitate creativity by increasing interpersonal interactions. Although explanatory conversations have been linked to creativity, the present results suggest that, compared to more concrete explanatory conversations, the abstract explanatory conversations about concepts is more closely related to creativity.