

Title	プラスチックモデル制作過程で生じる不用物を用いた アイデア 創出支援に関する研究
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A Study on idea creation support using waste generated in plastic model production process

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A plastic model is a model toy built from plastic and based on given parts and assembly instructions. Some creators in the production of plastic models do various processes in this production process to produce their own works, rather than assemble everything as described in the manual. In this research, we define such a remodeling action that is performed to produce an original work that is not specified in the assembly manual.

We need two abilities to make a modification. The first ability is knowledge and skills related to production technology. In order to acquire these, in general, means such as book-based learning and interaction between producers are used. The second ability is the ability to come up with new ideas for remodeling what kind of remodeling is to be performed and what kind of work is to be finally completed. As a general method for obtaining ideas for remodeling, there are observations of examples through books, events, and contests, active scenes of model characters, and interactions between producers.

However, the idea idea through observation and exchange of the entities and examples that became these models tends not to be an idea that the creator himself thought, but to imitate or develop the idea of another person. The sense of being lost disappears. On the other hand, in the case of a fictitious model, there is no entity to refer to, so there is no clue as to what kind of work to create.

Therefore, in this research, we propose a method to support creation of original remodeling plan for creators who have difficulty coming up with plastic model remodeling plan. In addition, experiments were conducted to apply the proposed method to three creators who have a hobby in plastic model production, and their effectiveness was verified.

In this study, I focus on the waste that appears in the production process. Rather than providing core

information such as examples and processes used in conventional general methods, it provides unnecessary information, that is, peripheral information other than those finally incorporated into the work. Based on this, it is a remodeling plan creation support method by letting you freely imagine how and what kind of work can be produced.

In the preliminary experiment, three subjects are examined to determine whether the waste is effective for generating ideas. As a method of verification, comparison is made under three conditions: 1) describe the idea without referring to anything, 2) describe the idea with reference to the model magazine, and 3) describe the idea with reference to the image of the waste created by the author. An experiment was performed. As a result, they obtained ideas from different perspectives, and the fact that their imagination expanded due to the useless things. Therefore, it is considered that the idea generation using the waste was effective.

In this experiment, it was verified that the useless objects expressed in the actual production are effective for generating ideas. As a method of verification, a plastic model in the unassembled state and its waste are given to each subject, and the plastic model is modified for a certain period of time. The unnecessary objects expressed by the modification are acquired by the web camera, uploaded to the server, and each subject browses the unnecessary objects of each subject through the web.

As a result, although the idea was generated, the answer to the effect that it was hard to say that the waste was not effective was obtained. On the other hand, each subject effectively used the waste by referring to the waste while using it together with the existing reference media. Therefore, for those who have difficulty in revising the plastic model remodeling plan in this study, it is necessary to use the existing methods to make the useless objects expressed in the actual production effective for generating ideas. I think that it is supporting the creation of original remodeling plans with the use of.