A Divergent Thinking Method that Allows People to Find and Exploit Their Blind Spots

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In order to create new ideas in planning and/or development situations based on some specific themes or existing objects, divergent thinking methods are often used. However, even if using the existing divergent thinking methods, it is still difficult to obtain novel ideas that are out of the fixed ideas of creators because they are usually restrained by their fixed ideas. Hence, we propose a novel divergent thinking method named BrainTranscending, which exploits the brainstorming, a typical divergent thinking method, as a method for finding the creator's fixed ideas, not as a method for idea generation, and which supports to expand ideas furthermore. I conduct user studies and confirm usefulness of this method.

This paper consists of six chapters. In Chapter 1, I define the objective of this study and describe problems of the existing divergent thinking technique. In Chapter 2, I describe a basic idea of the proposed method. This method consists of 5 steps: the first brainstorming session, grouping ideas based on target parts of

the object, listing up overlooked parts, the second brainstorming session referring to the overlooked parts, and crystalizing a final idea. In Chapter 3, I carry out a preliminary experiment to verify whether the brainstorming is effective as a means of extracting blind spots of idea-creators. In Chapter 4, I carry out user studies to examine the usefulness of the proposed method as a divergent thinking method by comparing the proposed method with a baseline method. The baseline method is the same as the proposed method but the step of listing up the overlooked parts is eliminated. As a result, I confirmed that the proposed method is effective as a divergent thinking method. In Chapter 5, based on the problems of the proposed method obtained from the results obtained from the user studies in Chapter 4, I devise a labor-saving technique where the second brainstorming session is omitted from the proposed method. I carry out user studies to examine the usefulness of this method. As a result, I found that the usefulness depends on users' characteristics. Chapter 6 concludes this thesis.