

Title	部分と全体の視点切り替えを促す文章作成支援ツールに関する研究
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## Abstract

Text writing is one of the major works. But if writer is not experienced, it is often too difficult to understand the overall statement of the text for reader. The reason of this happening is that immature writer concentrates on a text-part and misses overall statement of the sentence. In contrast, my research suggests new way of text-writing. It provides two points of view, parts and overall. And if your viewpoint is too part-side on text-writing, system you use changes from part of viewpoint to overall. This paper introduces proposed method and the system implemented based on it, named “ReConformation Editor”, and describe the experiment to verify the effectiveness of ReConformation Editor.

This paper’s configurations are as follows. First, I raise a point of issue which I wrote above in detail. Second, I introduce previous research relating to writing text. For example, other tools of helping to write text named “iWeaver” and “Scraps”, the study with technique of “Focus and Context”, the system of idea creation support named “Text Composter”, improving written text, and the objective evaluation method of text with human power or text mining. Third, I explain the preliminary experiment to design the ReConformation Editor. In this preliminary experiment, I used the prototype of ReConformation Editor, so I measured appropriate range of part of viewpoint and used the result of this experiment as a reference for original experiment. This prototype system has two modes, named “Parts Edit Mode” and “Overall Check Mode”. In the Parts Edit Mode, a small text box is generated where the contents are edited one line at a time, and the contents are written out to create a sentence. By restricting the viewpoint, this small text box intentionally aims to focus the viewpoint on a part. On the other hand, Overall Check Mode displays a pre-mode text blueprint. It can be done arbitrarily by user, or if the system determines that the viewpoint is biased toward a part, it will forcibly switch modes. Forth, the paper describes ReConformation Editor’s summary. This editor has double features too. However, Overall Check Mode remains the same, but Parts Edit Mode has been changed to normal text editor. And the conditions under which the mode-switching function is triggered are set to “During the specification of the system, if a line break by Enter key occurs after 10 minutes without seeing Overall Check Mode”. This condition is set based on preliminary experiment. Fifth, this paper shows original experiment’s summary, results of experiment, and its consideration. In the original experiment, I conducted the experiment with ReConformation Editor and gathered the test subjects. Then four test subjects were gathered. I asked them to create sentences using this system, two of whom used ReConformation Editor and the other two used the system excluding only “forced mode switching function” from ReConformation Editor. I

instructed subjects to create a blueprint for the text prior to writing. The time limit is two hours or less, and the word count is roughly 1,000 words. And I separately assembled raters to evaluate the text and asked them to evaluate the texts produced in the experiment. There were five evaluators. As a result, the average rating score for those who used Reconfirmation Editor was 3.4, and the average rating score for those who used the system without the ability to forcibly switch mode was 2.9. However, this data is not reliable due to the small number of subjects, and it is difficult to say that the use of Reconfirmation Editor is better evaluated. So, I did interview all of the raters to find out why each subject's writing received the score it did. As a result, through a detailed analysis of what I was able to glean from the interviews, I learned the following. The quality of the blueprints that the students are instructed to create before writing the text should play a significant role in the evaluation of the text. Even if the writing technique is excellent and the text is highly rated by the evaluators, the structure throughout the text can be found to be flawed. And the writing written by those who used A showed some errors in a very small area, but there were no errors in terms of overall structure. Summarizing the above, I concluded that the forced viewpoint switching function in A allows the user to look at the "whole" picture in writing, thereby increasing the efficiency of the writing process. Of course, issues have been found in this study. This time, the specification was that once a blueprint was created, it could not be modified again, but it is not hard to imagine that the blueprint itself should be able to be edited as well. In addition, some reported that the forced viewpoint switching function was convenient, but interrupted their work, making it difficult to recall what they were trying to write before the viewpoint switch. It would be a mistake to allow writing tools to interfere with the writing process. It is a future issue to design the system to force the user to switch viewpoints so that the user does not feel inhibited from working. With all of this in mind, Finally, I summarize this entire paper.

Although the medium may change, writing is a task we will continue to perform for many years to come. Although there has been a lot of research recently on using AI to create sentences, it is also important to improve our human writing ability at the same time. As one of the methods in this study, I proposed a system that prepares two viewpoints, "part" and "overall," and forcibly switches the viewpoint toward the "overall" when the viewpoint is biased toward the "part". Then, after conducting experiments with this system and analyzing the results, we were led to believe that the ability to switch viewpoints is useful in writing. I expect, in the future, this research will be useful in other studies of text making.