

Teaching How to Write Research Papers

- applying the problem-solution pattern -

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This paper describes one method of teaching undergraduate foreign students how to write research papers, applying a text structure called "the problem-solution pattern" and examines the effectiveness of this method.

Writing research papers is a key academic skill but it is not always an easy skill for students to acquire. We developed a textbook "Kenkyu-happyo-no hoho" (A Handbook for Writing Research Papers and Making Oral Presentations in Japanese for College-Level Foreign Students) in 1996, and have been teaching a Japanese language course in report writing using the problem-solution pattern.

This teaching method first introduces the problem-solution pattern as a basic framework for a research paper, showing students how to organize their arguments. McCarthy(1991) argued that "problem-solution patterns are extremely common in texts." The problem-solution pattern is a structure formed by a sequence of four related areas: situation→problem→solution→evaluation. In our course, students wrote papers which consisted of seven parts. The seven parts are - introduction→situation→cause→effect→solution→evaluation→conclusion.

The teacher then gave detailed feedback at each stage, especially for the first draft.

The course is divided into the following stages:

- (1) Selecting a theme
- (2) Preliminary survey of the theme and briefing by the student to the rest of the class
- (3) Writing a preliminary outline
- (4) Gathering material and another briefing by the student
- (5) Writing a detailed outline, then individual feedback
- (6) Writing the first draft and individual feedback
- (7) Writing the final version

We analyzed the drafts students wrote, looking at major problems in the first drafts and the extent that problems were resolved in the final version after feedback. Thirty-two papers written in 2000 were analyzed. Quantitative analysis of the data revealed the following findings.

(1) Students often fail to put appropriate arguments in the relevant sections [solution→evaluation→conclusion] . In many cases, problems in the evaluation and conclusion sections remained unresolved in the final version of the paper.

(2) Students find it difficult to quote information appropriately and to describe diagrams and charts and it was difficult to see improvements in these areas even in the final version. Paraphrasing is especially difficult for students, with many failing to adapt quoted information to the context of their paper.

At the end of the course, we surveyed current and former students about the course. Most students said they found the course helpful and many former students said that learning "the structure of a research paper " had helped them to write the papers in other courses. These results help support our argument that this course is an effective method for developing academic writing skills.

In the future, we would like to develop more effective teaching methods and teaching materials, in particular those which help students construct appropriate arguments in the relevant sections [solution→evaluation→conclusion] and help them quote and paraphrase information well.

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