Improving the Intelligibility of a Self-Study Application
For Japanese Academic Writing Using a Paragraph Writing Method

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Abstract: In this study, we tested improve ments to an academic writing application, based on the method of a five-paragraph structure and rhetorical functions that we previously developed to help novice writers learn to write papers and reports in Japanese for academic purposes, Our previous research showed how students' understanding, knowledge and skill in writing Japanese improved while using our application. However, we found it was necessary to change some aspects of teaching the writing method.   This is mainly because, although students understand the method, they had difficulty using it. Even though some students are familiar with the concept of a paragraph taught in English classes, when it comes to Japanese writing, they cannot recognize what a paragraph is. We hypothesized that   English terminology and ideas might be blocking their understanding.   To overcome this, we felt it is necessary to retrieve the idea of a paragraph in English classes and incorporate it into Japanese writing classes. In this study, we sought a different approach for novice writers to acquire the foundation of Japanese academic writing.

Keywords: Academic Writing, Paragraph Writing Method, Self-Study Application, Writing Application

Introduction

There have been many reported cases of freshmen not having sufficiently competent writing skills for academic purposes (Suzuki 2007, Toyota 2006, Okumura 2004). This is mainly due to lack of Japanese writing skills for academic purposes. Yabe (2008) stated that students were supposed to acquire research, thinking, reading, and writing skills based on the Japanese curriculum guidelines before they start higher education at colleges or universities, but the skills acquired are not sufficient. This hinders students with their higher educational studies, since writing skills are essential in most cases (Yabe). More schools now offer remedial or introductory classes for academic writing than in previous decades; some even offer writing classes before the start of the school year, because students cannot survive school life without those skills. Additionally, there are numerous books published on academic writing and computer applications have been developed to help students write better. However, there is still no prominent method to teach students to write well.

The Current Situation

In order to develop the application, we examined students' current ability and knowledge with regard to writing skills by analyzing students' term papers. We found that many papers had no essay structure. Some read like prosaic journals, impressions or thoughts. Toyota and Okumura (2006) revealed similar cases where writers could not express their opinions appropriately and could not write papers or reports based on the essay structure. The writing techniques students have learned in high school differ from the ones they need for academic writing at college or university. Until the end of their high school education, students mainly experienced writing journals, impressions and thoughts, using the four-part organization of Chinese poetry: introduction, development, turn, and conclusion. They wrote about their feelings, thoughts, and emotions in these types of writing so they did not have much opportunity to convey their opinions, or arguments based on fact or evidence.

The forms of writing students need for academic purposes are reports, essays, and research papers, which require a different structure: introduction, body and conclusion (Kinoshita 1994)(Ohshima et al 2005). It is essential for students to acquire academic writing skills, as well as to understand what an academic discourse community is, what it might expect of them, how and why things are done, and how things are valued in the particular area of study in which they are writing (Paltridge et al 2012). The logical structure of academic writing usually consists of three parts, introduction, body and conclusion, which readers find easy to understand. In order to help writers express their opinions appropriately, Oshima (2004) and Ikeuchi (2005) experimentally adapted the paragraph writing method for Japanese writing, but no research results have been verified as yet. Since students have barely any experience in writing academic reports, essays, and research papers, they have to start by distinguishing the difference between writing impressions or journals and academic writing. Our pretest was designed to see whether or not students can learn how to construct written arguments, using the essay structure and paragraph writing, (an introductory paragraph, several body paragraphs, and a conclusion), as a result of which they can discuss their opinions in an appropriate form for academic purposes (Iki and Shibasaki 2011).

Figure 1: Template for the Pretest

The Pretest

The pretest used a combination of templates made with Microsoft PowerPoint and a short lecture about fundamental rules for academic writing in Japanese. We prepared pages with textboxes for an introduction, several body paragraphs and a conclusion to create an outline for students and help them keep to the essay structure. Each page has a textbox for the topic sentence and an indication of which part the student is working on, such as an introduction or body. After the students have listened to the lecture on writing, they can start to create their own outlines and fill out the textboxes prior to writing the essay (Figure 1). If they need to add more body paragraphs, they can add in as many as necessary.

However, as a result of the pre-test, we found

that using the Microsoft PowerPoint templates did not really help students write better essays. The templates were too flexible, which allowed students to start writing without creating an outline.   In addition, we hypothesized that it might be easier for students if the length of the document was limited.   Though a three-paragraph essay (introduction, one body paragraph and a conclusion) is too short, we felt a five-paragraph essay (introduction, two body paragraphs and a conclusion) would be a reasonable length. This would also allow writers to add more information, such as statistics, quotations and definitions, to raise the level of detail and sophistication of the entire essay (Davis and Liss 2007). Composition classes in general mainly teach the use of five-paragraph essays, particularly at colleges and universities in the United States, where different types of rhetorical functions are also taught, for example explaining, cause-effect, classification, comparison and contrast, and argumentation (Hale et al., 1996). As a result of the pretest findings, for this follow-up study, we therefore developed the application for novice writers so that they could acquire the knowledge and skills to enable them to write argument- or opinion-based essays using a five-paragraph structure, together with rhetorical functions.

The Previous Experiment

We developed the application based on the result of the pretest.   The features of the application are designed especially for Japanese novice writers to learn, practice and acquire basic writing skills and knowledge, such as the ability to use a clear essay structure and rhetorical functions, using five-paragraph writing in Japanese. The application consists of two parts, the learning part and the practice part. Users can save their work files, an entire essay, each paragraph, and topic sentences automatically.   Once they finish writing, they can name the file and save their work as well.   As long as they keep the names of the folder and files the same, they can switch computers and carry the files with them to work on elsewhere. As in the case of the first assessment, to evaluate the changes made in this application, we first ran an experiment to assess operability, usability and intelligibility of the application, and whether further improvements were necessary.

Changes to the application resulting from the previous experiment

The new developments in our application were based on the results of a previous experiment, in which three university students and six prospective students participated, the aim in both experiments being to assess the operability, usability, and intelligibility of the application.   .
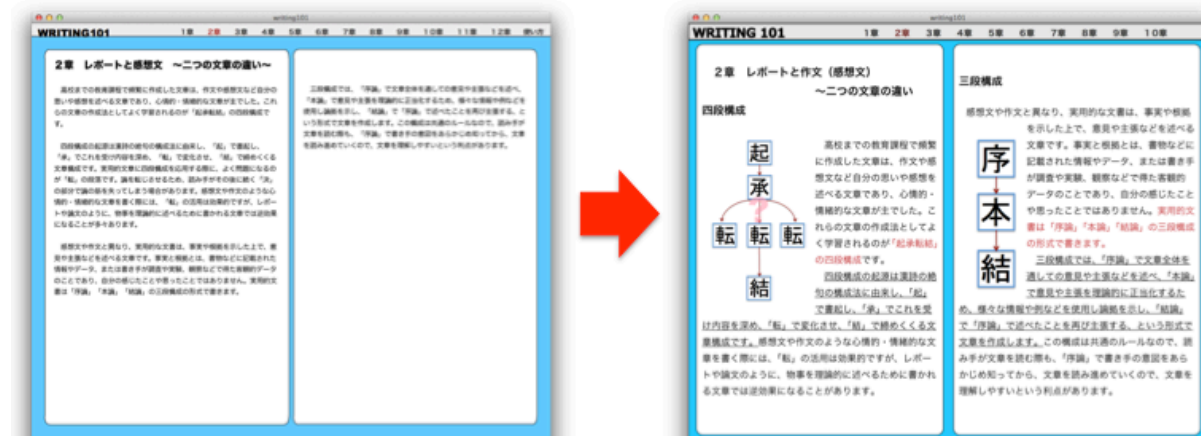
Figure 2: Comparison of the same Learning Page in the previous and current applications

As a result of the previous experiment, we improved certain aspects of the application.
Inclusion of visual aids
The left page in Figure 2 is from the previous application, while the right page is from the current one. These pages explain the same thing: the difference between and comparison of the essay structure and four-part

Chinese poetry.   While the left one shows only verbal information with no visual aids, while the right page shows the same information with visual aids.   Other changes included emphasizing and coloring the fonts, and highlighting the important points to make it easier for participants to focus on key points.   These kinds of changes were made on every page in both the Learning and Practice Pages. We attempted to use visual images, rather than just verbal explanations by simplifying the explanation to emphasize the contents.

Simplification and clarification of contents

Since some participants tend to skim while others go through explanations in detail, we repeat important information wherever students need it to prevent them missing it. However, some participants pointed out that there was too much information to comprehend in the original application, thus it might be better to focus on the essay structure and difference between the two types of writing, the essay structure and four Chinese poetry styles of writings.   It is essential to use at least one rhetorical function to practice writing; therefore we decided to restrict the current application to argumentative essays, since some participants were already familiar with the idea of argumentative or persuasive essays, because universities sometimes set argumentative essays in entrance examinations.

Some participants in the previous experiment did not understand that the purpose of the application was to create an outline, with topic sentences and thesis statement, and then writ paragraphs for each. Therefore it was necessary to make clear what they should do, step-by-step.

Most students were familiar with the use of paragraphs in English, so we changed the use of the term "paragraph".   Participants were familiar with the term "paragraph reading" as opposed to   "paragraph writing", because "paragraph reading" is a common technique taught in Japan to answer questions in English examinations. Although the word: paragraph" has the same meaning in both phrases, participants cannot recognize it as the same concept.   To obviate this problem, we adapted the application so that participants could easily understand that the term "paragraph writing" derives from the same concept as   "paragraph reading".

Procedure for the current experiment

Some students wrote too long or too short to edit in the previous experiment, which gave them difficult time to edit, From the procedure aspect, it might be helpful to decide edit the paper with application if they have 5 paragraph argumentative writing.   The aim of the second experiment was to evaluate how alternation, changing the aspects of explanation, the usage of visual aids and etc, affects intelligibility to improve the application In order to assess the changes made to the application, we decided to assign participants a five-paragraph argumentative essay and then edit it using the developed application. Participants were then asked pre-test, previous experiment, current experimented to rate their experiences in both sessions. As of 19 June 2013, nine university students had participated in the assessments of the application, which took place during June 2013. Both structured and unstructured questionnaires were used to collect the data.
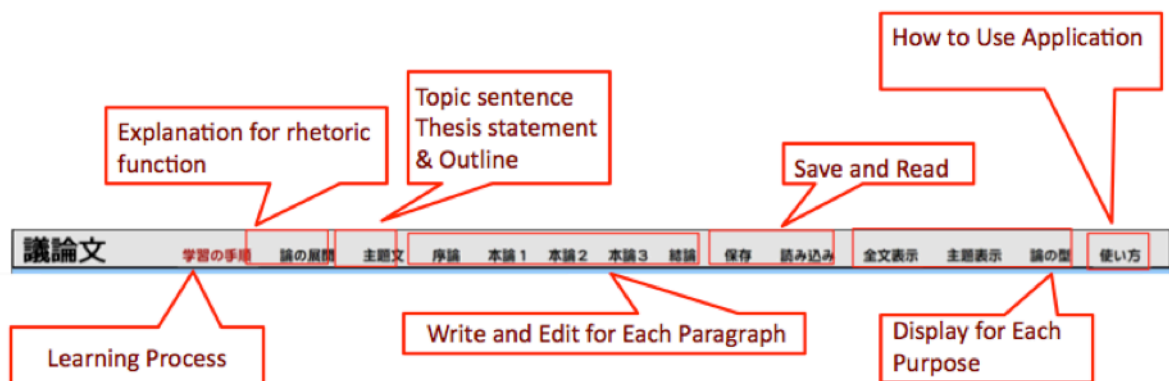
Application

Figure 2: The Application

As stated above, we aimed to improve the application based on the results of the previous experiment. In the second stage application, we sought a different approach for novice writers to attain the foundation of Japanese academic skills. Figure 3 shows the menu for the application.
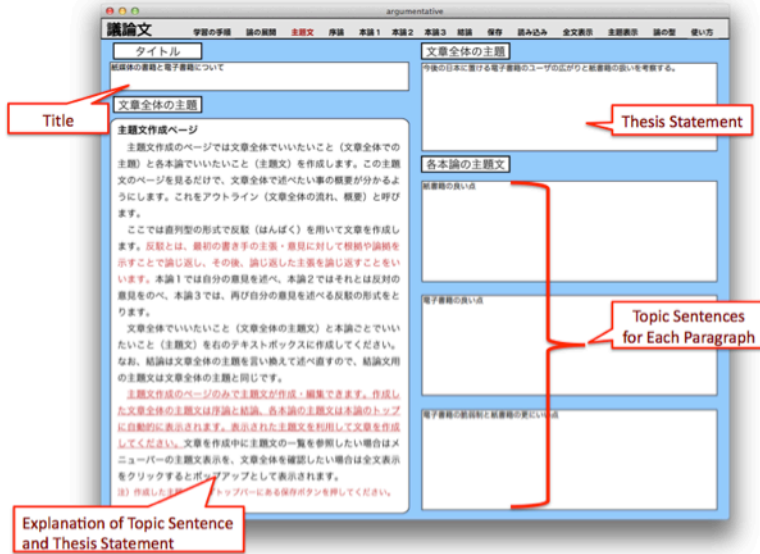
Figure 4: Outline Page

The learning part enables students to learn the workflow of writing academic papers. It begins with the necessary basic knowledge, such as the difference between writing impressions or thoughts as opposed to academic papers or reports, the definition and elements of a paragraph, paragraph writing, and the relationship between paragraphs and the essay structure. Students can learn the foundations of all they need to know.

Then, using the practice part, students can actually practice writing paragraphs, following the instructions for an argumentative essay. Students plan the workflow first to accomplish what they are going to do step by step. Then, starting from the Outline Page (Figure 4), they create the thesis statement, topic sentences for each paragraph, and the title. The left textbox is for the explanation of what the writer should know in order to create topic sentences and the thesis statement. The page was designed so that, once writers read it, they will be able to comprehend what to write and how to write the outline in the right textbox. They can write, edit and save the thesis statement and topic sentences just using the Outline Page. Once they complete the thesis statement and topic sentences for all the body paragraphs, they can start writing a paragraph.

All the Practice Pages have their own textboxes to fill out with a display for the topic sentence or the thesis statement for the paragraph (Figure 5). Either the topic sentence or the thesis statement from the Outline Page will automatically shows up when a student opens the Practice Page. If they have omitted anything at this stage, they will have to go back to the Outline Page to create it. There is an explanation about what they should write in the paragraph, depending on the rhetorical function on the left. Students can write, edit, read and save the files for both the Paragraph and
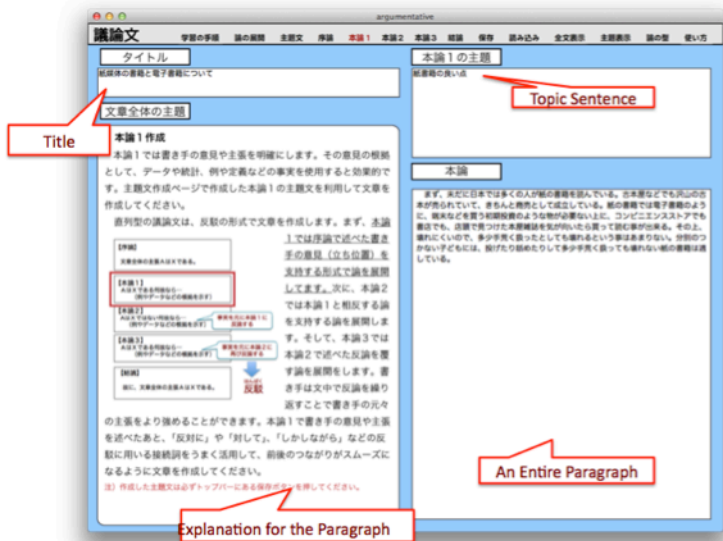
Figure 5: Practice Page

Outline Pages.

In addition, the application can display the entire document and outline as pop-up windows. Users can use these displays at anytime, whenever they need to refer to them. From the Entire Essay Page, if necessary, they can also post the document as an entry on a blog set up previously.

Assessment procedure

The experiment consisted of two sessions. The first was to assess participants' writing skills and knowledge at the start of the experiment, and to prepare them for the second session. Participants were asked to read some passages on which to base a five- paragraph argumentative essay. This was followed up by interviews with the

students to assess their experience, using both structured and unstructured questionnaires.   The second session was to assess the usability, operability, and intelligibility of the application. Participants were asked to edit their writing from the first session using the application. Again, both of structured and unstructured questionnaires were administered after the second session, to assess students' reactions.

Results

	understood well	somehow understood	else
Previous Experiment	4	3	2 (not really)
Latest Experiment	8	1	0

Table 1 Comparison: Understanding the Writing Process

	understood well	somehow understood	else
Previous Experiment	6	2	1 (not really)
Latest Experiment	7	1	1 (so so)

Table 2 Comparison: Undeanding the Essay Structure

In comparison with the results of the previous experiment, it seems that participants understand the purpose of the writing process better with the second stage application; they could create topic sentences and thesis statements as an outline for the entire essay and write each paragraph based on the outline (Table 1) as well as the essay structure (Table 2).

The interview sessions also showed that some participants found it was fun to learn academic writing skills using a computer application. Some participants were previously experiencing difficulties writing reports at school. While there are no classes offered to teach them academic Japanese writing, they are nevertheless required to submit written reports. When they become aware of their lack of academic writing skills, this leads to another problem: there is nowhere they can get help or learn the basics of writing. As a result, some participants wanted to use the application we developed immediately to help them write reports or, at least, to learn the fundamentals of writing; they wanted to put the Practice Page into use immediately to help them adapt their writing style to writing paragraphs. It is clear that there are students who try to write reports based on the four parts of Chinese poetry, since they do not know any other way to write.   Using the four parts of Chinese poetry confuses them since there is a "turn" in this Chinese method of writing.   Including this "turn" makes it difficult to keep the report consistent.

Some participants asked if they could have the application as soon as we completed its development because, they think it would significantly help their writing. They felt that using the application definitely enabled them to develop a clear essay structure, as well as helping them plan an initial outline for their writing project. Though it takes time to learn the fundamental writing skills and adjust their writing style, once they had accomplished this, they found it much easier to write that way compared with their previous attempts. Additionally, being able to see the topic sentence for the paragraph they are working on keeps them focused on what they are writing about, and is advantageous since, without this aid, it is difficult for them to keep their writing coherent. Some participants said that previously they had had no clear idea of what they wanted to say in their reports. The following two charts summarize the improvement in understanding which students experienced using the second stage adapted application. Eight of the nine students, double the number in the first experiment, reported that they understood the writing process well using the new application, while seven out of nine said they understood the essay structure well. Thus the new application seems particularly helpful to students in understanding the writing process. The high number of students who said they understood the writing process well in the second experiment suggests the new application is significantly more helpful and easier to use than the first stage application.

Conclusion

The results of the latest experiment suggest that simplifying the contents of the application has made it easier for novice writers to understand the writing process and improve their writing skills. Since the main purpose of this application is for novice writers to understand the fundamentals of academic writing and acquire better academic writing skills, we regard the changes to the application as successful. We expect an even wider applicability of the application with future improvements. However, further experiments and data analysis will be necessary to ascertain this.

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