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A Collaborative Learning Method of Learning from Errors in Japanese Writing

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Abstract: The purpose of this study is to develop a collaborative learning method for Japanese language learners where they share each other's essays and learn from one another's errors. Targeted learners of this method are those able to write short compositions in Japanese. The procedure for this activity was as follows: first, each learner wrote a composition of about 300 words in Japanese about a four-frame comic of a story from *Aesop's Fables.* The learners then broke into groups of three, and each group collectively looked for errors in their compositions, discussed these errors, and made corrections. Next, they recorded their findings on error-analysis cards designed by the authors and entered the contents of the cards into a database of learners' writing errors. Finally, each learner reviewed not only his or her own writing errors but also those of others using the database. The authors used this activity with 11 Chinese speakers with Japanese skills of Level 2 or higher on the International Japanese Language Proficiency Test. The results of the activity are as follows: the learners' post-test scores for Japanese skills after the practice were higher than their pre-test scores. The learners found about 80% writing errors in their compositions. The most common errors were the misuse of intransitive and transitive verbs. The learners learned their writing-error patterns by reviewing sentences with errors in the error database.

Keywords: Collaborative learning, Japanese language learning, learner-participation database, learning from errors

1. Introduction

When learning a foreign language, it is important to learn from one's errors rather than fear making mistakes. Normally, learners think that errors are bad, so they rarely write down or memorize incorrect structures or the reasons for the errors. As a result, they frequently repeat their mistakes. Recording errors is a way of stopping learners from repeating mistakes. Toward that end, we have proposed a learner-participation database of writing errors (Zhang and Kita, 2017).

Teramura (2011) made a database of Japanese errors made by foreign learners for language researchers, and Koyanagi and Mochiduki (2012) formulated an online dictionary of Japanese errors aimed primarily at Japanese language teachers. Both databases were made by specialists in Japanese language education. In this study, however, the learners themselves created the contents of the database of errors.

Because China employs a traditional teacher-centered method, which focuses on rote learning and memorization of words in Japanese language education, learners are required to understand the writing errors in their compositions independently. The purpose of this study was to develop a collaborative learning method in which students seek, share, and learn from the errors in composition.

2. A Collaborative Learning Method Using an Error Database

This study adopted the concept of a learner-participation database (Simomura, 1997). We designed a learner-participation error database of errors in learners' compositions. We developed a collaborative learning method that emphasized sharing writing errors and learning using the error database. The flow of the collaborative learning method is shown in Figure 1. The error database was made using the database function of Moodle, a popular e-learning system. The database consisted of learners' names,

a classification of error types, composition themes, and the contents of errors. We based our error classification on that of Murata (2003), which we then segmented into 18 items, including vocabulary, grammar, and expression.

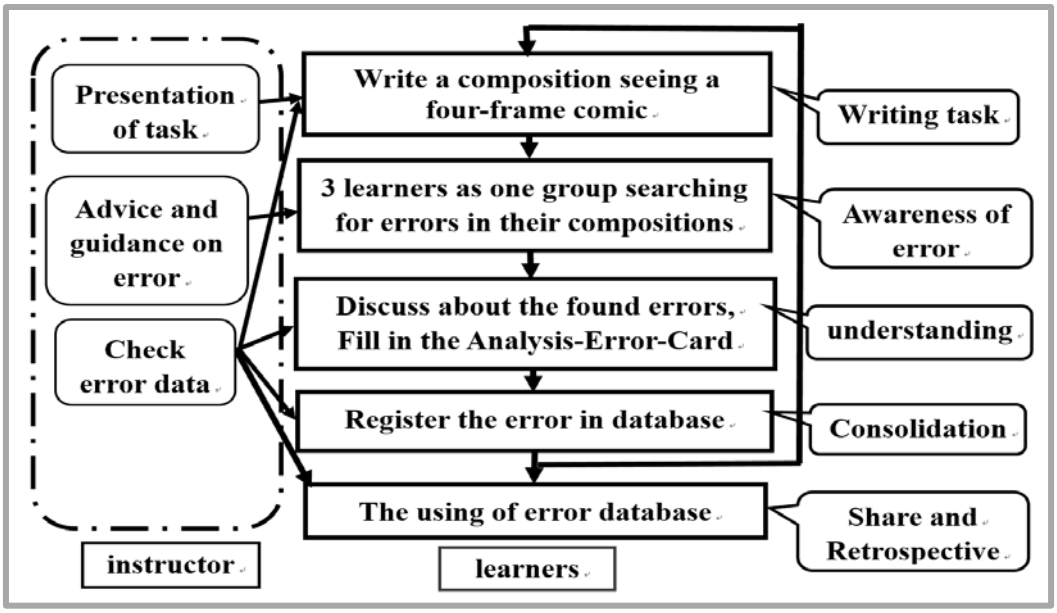

Figure 1. The sequence of the cooperative learning method.

The sequence of the cooperative learning method is as follows. At first, each learner writes a composition. In order to reduce the writing burden on learners, the activity uses four-frame comics as the composition material. The four-frame comics consisted of four *Aesop's Fables* stories, familiar to learners. Each learner writes a composition of about 300 words in Japanese about one of the comics.

Next, learners look for errors as a group activity. After writing their compositions, the learners divide into groups of three, first look for mistakes in each of their compositions, then discuss them, and finally consider the correct alternatives.

Thirdly, learners fill in the error-analysis cards. The learners in each group write their findings about the errors on the error-analysis cards, designed by the authors. The cards comprise columns for incorrect sentences, correct sentences, interpretations, and classification of errors.

Fourthly, learners record data in the error database. Each learner registers his/her own errors in the error database, one at a time, from the cards.

Finally, learners use the error database. The error database can be used in two ways: first, learners can use it to reflect on their own errors. Second, they can learn not only from their own errors but also from those of others.

To confirm the effects of this collaborative learning method, we conducted the practices four times. The participants were Chinese speakers with intermediate or high proficiency in Japanese (Japanese Language Proficiency Test Level 3 or higher). Before the activity, we created a guide explaining how to use the e-learning system Moodle and the sequence of the collaborative learning method. To verify the effectiveness of the learning method, we administered a questionnaire and test before and after the practice.

3. The Results of the Collaborative Learning Activity

After four trials, a total of 247 errors were registered in the error database. Error types in descending order of frequency are shown in Figure 2.

From the first through third trials, little change was observed in the number of errors or the number of words in the compositions. After the third trial, the authors instructed the learners to reflect on the error database. In the fourth trial, the number of errors decreased by more than 25%, although the number of characters in the compositions remained the same. It is likely that retrospective study

using the database reduced the number of errors. Therefore, it would be beneficial to conduct the retrospective study after practicing a few times.

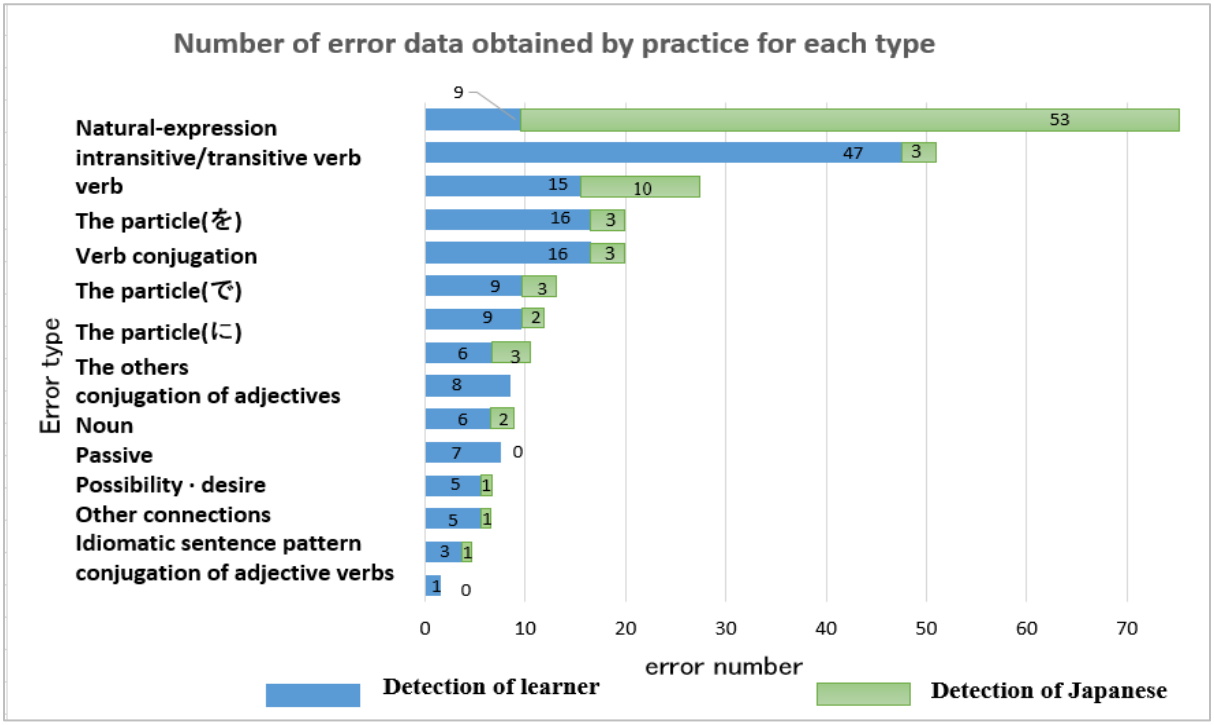

Figure 2. Error types in descending order of frequency

4. Analysis of the Effectiveness of the Cooperative Learning Method

Learners were aware of their patterns of writing errors. 90.9% of learners responded “yes” or “mostly yes” to the question “Are you aware of your own error patterns?” When learners reviewed their errors using the error database, they noticed that similar errors occurred multiple times, thus recognizing their own tendencies toward that error. Recognizing such tendencies of error kept the students from repeating these errors.

The learning effects of the collaborative learning method were as follows. In this collaborative learning method, we analyzed the number of errors detected between learners and calculated the error detection rate. As shown in Table 1, the result of the detection rate showed that the rate of error detection in practical tasks was 70% or more. In other words, it indicated that this collaborative learning method was effective for error detection among learners.

Detection rate = number of learners detected ÷ total number of errors excluding naturalness … (A)

Table 1: Error detection rate (excluding errors related to the natural expression)

Writing theme	Error number	Natural error	Excluding naturalness	Learners detection	Detection rate
First time	68	18	50	44	88%
Second time	57	8	49	43	88%
Third time	65	11	54	43	80%
Fourth time	57	16	41	32	78%

To confirm whether or not the learners’ Japanese writing fluency improved after the trials, we administered the same test before and after the trials. The extent of improvement varied among the learners. The maximum score of improvement was 53.7 points, while the minimum was 6.6 points.

Mostly learners were satisfied with the collaborative learning method. About 90.9% of the learners said that they were satisfied with this learning method. Among the feedback posted on Moodle were the following:

- "I am glad that I found my own error tendencies with the error database."
- "The mistakes I didn't notice were caught by others. When I discovered someone else's mistake, I was careful not to make the same mistake."
- "Studying while talking was pleasant. Registering my own errors in the error database was very helpful, because I could review it at any time."

Therefore, through this method, learners realized the importance of learning from their own errors by sharing errors and mutual learning, and were able to discover their own error tendencies.

5. Current and Future Work

Most of the participants in this practice were advanced-level Japanese learners. We considered that it was difficult for intermediate learners to write compositions by watching four-frame comics. Therefore, we will change the composition work into translating Chinese sentences into Japanese one by one.

Learners could detect about 80% of the errors, but there were many undetected errors. To improve the learning effect of collaborative learning, we should support learners to raise the detection rate. As a solution, we are planning to support collaborative learning using computers, or systemize the collaborative learning method. The system will point out to learners' sentences possibly having errors and advise them to discuss whether they are wrong. In addition, to discuss well, it will provide grammar knowledge on the sentences.

We intend to repeat the activity with more participants, since the 12 participants in this exercise comprised only a small sample. We are asking Chinese universities for cooperation. We plan to increase the number of materials and repeat exercises to enrich the data in the error database.

Here, we conducted a post-test immediately after practice, but to confirm the permanence of the learning effect through cooperative learning. In the future, we will conduct a fixation test one month after collaborative learning.

6. Conclusion

In this research, we developed and put into practice a collaborative learning method of sharing errors and learning by using error databases. We found that it was possible for learners to detect errors with others' help, and their awareness led the learners to stop making certain errors. In addition, the rate of the learners' detection of the errors was about 80%. Learners' skills in Japanese written expression were thus enhanced. We obtained useful information for future Japanese teaching, such as a better understanding of error-prone items and undetectable errors. Future tasks will focus on improving learners' error detection rates and repeating the activity with a larger number of subjects.

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