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Abstract of Show & Tell

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Theme 1. Design of software for interactive language learning (Japanese)
2. Assessment of the effectiveness of Computer-Assisted and Web-Enhanced Language Learning

Title A Japanese reading comprehension support system for German-speaking learners using morphological analysis

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Abstract

This study presents a reading tutorial system to improve the reading skills of German-speaking learners of Japanese. We have already developed a system for English-speaking learners, and there is a strong need for further language versions. This German version is not only for German-speaking learners, but may potentially lead to similar systems for other language speakers.

This system automatically hyperlinks each word in the inputted Japanese sentences with its German translation. By clicking on each unknown word, the learner can instantaneously access the pronunciation and the German translation of the word. Therefore, the on-screen reading process is not interrupted by looking for each unknown word in paper-based dictionaries.

To maximize the availability of this interactive web-based software, the system can be accessed by learners through the Internet using their WWW browser. On the system web page, the learner writes (or copies and pastes) any Japanese text into a text box and clicks the "dictionary" button. A new page then appears, divided into left and right frames. The left frame shows the inputted text, and the right frame, the German translation. Each word on the left is hyperlinked with its translation on the right. When any word in the left frame is clicked, its translation is shown in the top of the right frame.

The system also has a learning process management function. It records every word accessed in the translation (i.e., clicked by the learner) and shows the record to the learner after he/she finishes reading. This function is effective in the acquisition of vocabulary.

The system is based on the server and client model. Japanese text inputted on the learner's client computer is sent to the server computer. On the server, the inputted text is first divided into words using the "ChaSen" morphological analysis system (Matsumoto et al. 1999). Then, the system refers to "WaDokuJT", a Japanese-German dictionary published by Apel et al., to link each word with its translation.

For intermediate learners, for whom good learning materials on the Internet are scarce, a reading materials bank has also been prepared using this system, and already contains over 350 texts. This bank is also available to learners through the Internet.