Occurrence frequency and transition probability of the Chinese four tones were analyzed statistically (Hiki et al., Proc. Int’l Symposium on Tonal Aspects of Languages, 2004, Beijing, pp. 73-74). The database used for the analysis was the Grammatical Knowledge-base of Contemporary Chinese (S-W. Yu, editor, Tsinghua University Press, China, 1998). In this paper, the investigation has been conducted from the standpoint of transmitted entropy, in order to assess the efficiency of contradistinction of tones in the distinguish among homonyms within same phonological sequence groups in frequently used contemporary Chinese words. Among the bi-syllabic words with different simplified Chinese characters, more than 10% are belonging to homonym groups with same Pinyin notation and many of these homonyms can be distinguished by difference of tones. The investigation result about type of tones in contradistinction shows that the occurrence frequency of contradistinction between Tone-4 and other tones is higher than average occurrence frequency. However, some characteristics about type of tones in contradistinction have been observed according to the number of words in one homonyms group is 2 or more, or according to the position of syllable in bi-syllabic words is the 1st or 2nd. This statistical analysis indicates the possibility that Chinese homonyms groups can be distinguished by tones. And it can be applied as useful material in the guidance of learning of tones for Chinese beginners.

Practice and research in the composition education that is using computer network have been more and more active. In this research, the web based composition/correction system has been constructed. By utilizing the standardized "Grammatical Correction Mark", previous problems such as non-standardization of evaluation criteria and non-standardization of correction description have been solved. Meanwhile, the retrieval function for error corpus has also been developed. Through this function, the collected composition correction data are able to be analyzed for natural language processing and language education research. In this paper, the development and evaluation summary of this system will be expressed.