A Study of Composition/Correction System with Corpus Retrieval Function

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ABSTRACT

Practice and research in the composition education that is using computer and network have been more and more active. Through online composition system, a large amount of written texts produced by students and teachers can be collected. This kind of information is called a learner corpus, which is important in second language education because the specific learning situations of learners can be analyzed. However, there is still little effective application on how to utilize the collected learner corpus in pedagogy. In this research, a web based composition/correction system has been constructed. It can not only support online composition submission and correction, but also supply a retrieval function for learner corpus. This function has been combined with another CALL (Computer Assisted Language Learning) drill system to create more effective exercises according to learners’ misuses. This research has proposed a unique mechanism to integrate both construction and application of learner corpus.

Keywords: Computer Assisted Language Learning (CALL), E-Learning, Learner Corpus, Second Language Education, Tutorial Chinese, Web Based Composition/Correction System

INTRODUCTION

Practice and research in the composition education using computer and network have been more and more active (Thompson, 1993; Sugimoto, 2004). Compared with traditional paper-writing works, online composition submission system can save a lot of time and effort. While for the normal correction functions in many online composition submission systems, student’s learning stage is usually not considered, and there is not enough correction tools supplied to teachers corresponding to a variety of misuse. The composition and correction information has often been accumulated respectively and not easily been retrieved. (Urasaki & Kogo, 1998; Kawai, 1996). One more important issue is that through online composition submission
system, large amount of written texts produced by students and teachers can be collected. This kind of information is called a learner corpus (the plural is learner corpora), which is very important in second language education because the specific learning situations of learners can be closely analyzed (Granger, 2002; Granger, 2009; McEnery & Wilson, 2001). However, there is still little effective application on how to utilize the collected learner corpus in pedagogy (Nesselhauf, 2004). For example, a language learning environment named Intelligent Web-based Interactive Language Learning (IWiLL) has been constructed in Tamkang University, which allows both teachers and students to create and search an online database of student essays and teacher annotations (Wible, Huo, Chien, Liu & Tsao, 2001). In Tokushima University of Japan, a computer mediated language learning environment called CoCoA (Communicative Correction Assisting System) that supports foreigners and teachers to exchange corrected Japanese compositions via Internet has been created. They also have proposed CCML (Communicative Correction Markup Language) to record and exchange corrected compositions with some marks and some comments (Yano, Ogata & Sakakibara, 1997). In these two projects, learner corpora are constructed timely through e-Learning platform; however, there is no specific proposal on the pedagogical applications of these constructed learner corpora.

In this research, we have constructed a web-based composition/correction system as part of Tutorial Chinese Platform (TCP) (Liu, Scott, Kato, Kato & Urano, 2011) in Waseda University. The system will not only suitable for students in writing compositions, but also support teachers in correcting and making comments on compositions, as well as in retrieving and detecting students’ common misuses (Liu, Sunaoka & Urano, 2006). Moreover, the compositions from students, together with the correction information from teachers, has been structured and constructed automatically into learner corpora, and the retrieval function has also been developed and combined with another CALL (Computer Assisted Language Learning) drill system to create more effective exercises according to students’ misuses (Liu & Urano, 2011; Liu, Liu & Urano, 2012).

This research proposes a new mechanism to integrate both construction and application of learner corpus through the combination of web based composition/correction system and CALL drill creation function. Automatically XML tagging for composition/correction corpus and corpus retrieval function play crucial roles in this mechanism. It makes this system different to previous ones that not only can construct learner corpora timely, but also can apply these corpora in pedagogical activities effectively. This system has been carried out for years in Waseda University and the vitality of its role has been confirmed by the improvement in students’ language skills and the positive results of its usability evaluation.

The development issues of this web based composition/correction system and the mechanism of construction and application of learner corpus has been taken into account in this paper. It is organized as follows: The next section describes model of Tutorial Chinese, which is the pedagogical background of this research. The third section discusses concept and features of this web based composition/correction system. We have designed system after taking consideration of both students’ and teachers’ requirements. The fourth section tackles construction of learner corpus, which plays the most important role in our language pedagogy. The fifth section covers design issues of system and the mechanism that how to combine the web based composition/correction system with CALL drill creation function. The implementation and results are presented in the sixth section. In the seventh section, operation and evaluation are described. Finally, our conclusion suggests future directions of this research in the last section.

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At Waseda University, a new language education model named Tutorial Chinese has been introduced since 2002. Tutorial Chinese classes are...
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