Research on the Application of Computer Intelligent Proofreading System in College English Teaching

Jun Min1,*
1Fuzhou University of International Studies and Trade, Fuzhou, China

*Corresponding author e-mail:minjun@fzfu.com

Abstract. With the rapid development of computer technology, people have higher requirements for English Teaching (hereinafter referred to as ET) tools. However, in ET, teachers need to correct students' homework, which will take a lot of time. Therefore, we can develop intelligent proofreading system (hereinafter referred to as IPS), which can improve the translation and proofreading of English syntax and phrases. Through corpus and other databases, we can calibrate English phrases and syntax with high accuracy, which will improve phrase translation and poor sentence coherence. By creating semantic ontology model and phrase translation combination translation algorithm, we can create semantic ontology model, which will better realize online collaborative translation and intelligent school peer-to-peer work, which will play an important role in ET. Through the IPS, we can display the situation in a graphical way, which will better carry out teaching activities. Firstly, this paper analyzes the positioning of IPS for College ET. Then, this paper analyzes the working principle of the IPS. Finally, some suggestions are put forward.

Keywords: Computer, Intelligent Proofreading System, English Teaching

1. Introduction

The traditional proofreading of English compositions is to check the errors line by line and word by word, which is a huge workload [1]. Therefore, there are many disadvantages in the traditional English proofreading work, such as common low-level errors such as typos and quotation errors, which may also be caused by negligence and cannot be detected manually. Therefore, we urgently need IPS, which can proofread English compositions [2]. Therefore, the IPS to replace the manual inspection has been the inevitable requirement of the development of College ET, which is also an important tool to improve the quality of teaching. At the same time, the computer has become an exploration of English examination media, which breaks through the traditional examination mode of education, and makes the examination questions, methods, requirements and evaluation more flexible [3-5]. Through the IPS, colleges can continuously improve the standardization of ET, English examination and result evaluation, which will meet the needs of frequent examinations. At the same time, IPS can improve the efficiency and quality of proposition, which will ensure the accuracy, effectiveness and reliability of education.
evaluation. Through the IPS, we can reduce the labor intensity of educators, which has become an important topic of College ET [6].

2. Application of IPS in College ET

IPS can be applied to college ET, which has applications in many aspects, as shown in Figure 1.

![Figure 1. Application of IPS in College ET.](image)

2.1. Supplement of teachers' composition evaluation

English composition is a kind of subjective problem, which also leads to different scores among experts. At the same time, natural language and Interlanguage are complex, which will lead to many differences between the IPS and teachers' scores. At present, China's most advanced IPS can not be fully applied to the high interest test, which can only partially replace people's work, such as GMAT and TOEFL. In daily writing teaching, the IPS can partly replace the work of teachers, which can help teachers proofread. For the daily teaching of College English writing, it is better for teachers to participate in the grading of grades with low accuracy. For other grades, if the students feel that the score deviation is large, they can put forward a re-evaluation to the teacher, otherwise the score is normal. Therefore, the IPS can greatly reduce the workload of teachers. The feedback and error checking part of the IPS may be wrong, that is to say, the IPS has the situation of false check or missing check. However, the feedback of the IPS is teaching oriented, which does not require to find out all the errors. As long as we can find out the mistakes, the intelligent teaching system will help students, which promotes the improvement of students' language ability [7].

2.2. Manual scoring is the reference

The English translation proofreading system based on phrases and syntax proofread the English translation results, which requires us to pay attention to the accuracy of phrases and syntax. We need to integrate the English translation and proofreading system of bilingual largest noun phrase, which will lack the record of user behavior data. Many teachers and researchers have adopted various methods,
such as using word processing or corpus processing software to judge students' compositions, which can use peer evaluation and other methods [8-9]. IPS can check most spelling mistakes. But for most grammatical errors, IPS can do nothing. Corpus processing software can process language at a deeper level, which will enrich the feedback of students' compositions. Therefore, the IPS needs more human participation. Peer review can find many problems in the composition, which can further stimulate students' learning autonomy. College English composition text is a kind of language input, which will have a positive or negative impact [10].

2.3. Mainly characterized by words and phrases

The most common errors in CET-4 composition are lexical errors, which proves the important role of phrases in foreign language learning. These two aspects are the advantages of general computer-aided composition feedback. A comprehensive natural language understanding system is good at vocabulary and phrase feedback, which must be narrowed to a limited range. The IPS needs to focus on the vocabulary used in writing, which can make a list. At the same time, the meaning of each word or phrase is limited, which will have multiple meanings [11].

3. The function of IPS

3.1. System architecture design

The overall architecture of English translation computer IPS designed in this paper is shown in Figure 2. The work module, English translation module, English translation proofreading module, search module, user module and behavior log constitute the main part of this system.

![Figure 2. Overall architecture of English translation computer IPS](Image)

3.2. Training process

The training process of the IPS is shown in Figure 2, including four parts: corpus preprocessing, vocabulary analysis, phrase structure analysis and scoring model construction. First, pretreatment. Preprocessing is to divide each composition into sentences, which can classify numbers and proper names. By copying, we can perform lexical analysis and phrase structure analysis respectively. Second, lexical analysis. Lexical analysis divides the sentences used in lexical analysis into words, which can be used for lexical feature statistics. By calculating the composition length and vocabulary diversity, we can calculate the vocabulary distribution by combining the hierarchical vocabulary. Third, the analysis of phrase structure. Part of speech tagging is used in phrase structure analysis, which can use phrase template library. By matching, we can get the correct and wrong phrase list, which will be more scientific.
statistics of the number of correct verb phrases. The training process of scoring model is shown in Figure 3.

![Training process of scoring model](image)

**Figure 3.** Training process of scoring model.

### 3.3. Feedback of composition content

The second part is for the content of the composition, we can automatically find the composition that may be off topic, which can be given to the teacher to make the final judgment. For multiple students' compositions on the same topic, we can remove the stop words according to the stop words list, which can use rules to restore all words to roots. After clustering words, the composition with special words will appear at the edge of clustering. Then, we can feed back these compositions to teachers or teachers, which will be verified finally. The working principle of content processing is shown in Figure 4.

![Working principle of content processing](image)

**Figure 4.** Working principle of content processing.

### 4. Conclusion

Through the IPS, colleges can continuously improve the standardization of ET, English examination and result evaluation, which will meet the needs of frequent examinations. At the same time, IPS can improve the efficiency and quality of proposition, which will ensure the accuracy, effectiveness and reliability of education evaluation. This paper designs an IPS, which can use the design search module to search words. Through the behavior log, we can analyze the user's behavior data. Through the
verification of this paper, the system can improve the accuracy of English translation results, which can proofread English compositions, which can reduce the cost of manual proofreading.

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