
The application of network automated essay scoring system in college English writing course

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To cite this article:

Zhang Qiang. The Application of Network Automated Essay Scoring System in College English Writing Course. *Education Journal*. Vol. 3, No. 3, 2014, pp. 128-132. doi: 10.11648/j.edu.20140303.12

Abstract: With the innovation of computer technology and the application of the new network technology, many auxiliary network teaching and learning software and programs related to English teaching has emerged. Automated essay scoring system is a revolutionary innovation network system, in recent years, it makes the reform of English essay teaching mode more feasible. Basing on the network automated essay scoring system, this paper first introduces the development of this kind of system and then tries to optimize the design of classroom teaching of college English writing. Finally the paper proposes some potential problems of automated essay scoring system and provides some useful suggestions to the teaching of college English writing.

Keywords: Network Automatic Composition Scoring System, Writing Courses Design, Training

1. Introduction and Literature Review

Automated Essay Scoring System is a kind of network system using computer software or network to correct and score the compositions automatically. It has a great advantage over the teachers' manual work, during the process of automatic scoring, computers do not give grades to students by subjective judgment, and it can also do this job more efficiently. No matter how long the time will last, the computer won't get tired and make biased correction results. In addition, the automated essay scoring system could liberate the teachers from the heavy works of revising essays, and do all the revising tasks instead of teachers. So the teachers could have more time to prepare for their classes and put all their energy into classroom teaching. Most importantly, the students can obtain the teaching feedback in a short time and improve their writing ability more efficiently; they could train their writing skills with writing more essays, thus they could achieve the ultimate goal of improving their writing competence.

In western countries, the scientists had set up the language corpus and grading standards during more than 40 years of the study. In the late 20th century, it had entered the practical stage. In the field of automated essay scoring, the PAGE enterprise was the first company that began the research. In the 1960s, the company had finished the

exploitation of the automated scoring system, and introduced the PEG system, but this system can only do the preliminary analysis of the shallow text. As for the semantic research of the text, the scientists began to get preliminary achievement until the 1990s. The IEA system integrated the science of statistics, information retrieval technique and language processing technology, and thus realized the ability to analyze shallow text meaning. Currently the most advanced and mature system is the E-Rater, it can make the corresponding analysis and evaluation on the main idea, sentence using and structure of the articles, and has been applied to many large English language tests.

The research on automated English essay scoring system in China is not very mature compared with western countries. First of all, research on automated English essay scoring system in English speaking countries is based on their mother tongue itself; the research on automated scoring system in China has a very big distance and difference from that of western countries because English is a foreign language in China. There is a big difference in English ability among Chinese college students; their acquisition of English knowledge is quite uneven in terms of grammar, vocabulary and sentence structure. So far the researcher on top level of the research in China is Liang Maocheng, he analyzed the characteristic and the meaning of the shallow text, and in 2009 he began to implement the

plan of creating automated English essay scoring system for Chinese students.

2. The Development Direction of the Automated Essay Scoring System in Teaching

At present, the college English writing courses still suspends in the stage of explanation of writing skills and students' recitation of essay templates. With the popularity of computer and network autonomous learning, and automated essay scoring and feedback will play a more and more important role. To make the essay scoring more helpful to the daily teaching and feedback system, we should focus on the following three aspects in the future research.

(a) Targeted feedback. From the viewpoint of teaching, the targeted and personalized feedback is more important than accurate composition grading. If a teacher only give a grade to the student's essay, no matter how accurate the grade is, it is not enough. As for the students, he needs to know what kind of problems exist in his essay and what mistakes need to be corrected or avoided; for the teacher, he has to know the language points that the students had acquired and find the language points that still need further explanation. These goals can only be achieved by the detailed feedback through the computer essay evaluation system. The current essay scoring systems can only give comments about the imperfection of the language, spelling errors, etc., but these systems cannot suggest how to correct or improve them.

(b) Universality. Universality refers to realizing the scoring model's aim, that is, to train it for only one time and use it for a lot of times, and it is applicable to the review of non-specific topic composition. The current research on automated essay scoring focuses on the first goal of the research of automatic scoring, namely large-scale test scoring. It adopts one topic to train one scoring model, and the aim is to emphasize the accuracy of grading. There will be thousands of students writing essays in a large-scale test concerning one topic, so training an accurate scoring model can solve the problem. But the related research is relatively weak on the feedback tools of essay writing. In the daily teaching, each teacher will have a different title for the students. Moreover, the number of students for one teacher is limited, so the number of the essays that the students write each time would also be limited. So from the aspect of practical teaching, the non-specific topics for general computer grading are the best way to solve the problem. Now that we adopt non-specific topics for a general computer grading system, we should process the language and content respectively. When collecting essay titles for the training of students, we should cover the different essay titles as many as possible. We should also focus on the use of language in manual scoring stage. When scoring model was constructed we should eliminate the topic related contents. Thus a general

automated scoring model would be constructed, supplemented by the content evaluation method without training, such as the method of text clustering or key words, we can put it into the use of college English essay teaching.

(c) The division of human-machine interface. The concept of division of human-machine interface is to decide which problem must be solved by computer and what issues must need human participation, thereby achieve the maximum of the efficiency of the system with the least amount of human participation. With the contemporary technology, it is not realistic that the essays review could be completely done by machines automatically. So the development direction of automated essay scoring system is to combine the scoring approach of both human and machine, and design a best reviewing process that combines human participation and computer work, making a maximum mutual complement between human and machine. In the aspect of essay content evaluation, for example, the computer can find the word using in one or several essays is different from most essays through the same title's text clustering, these suspected digressing essays need to be submitted to the teacher and judged by the teacher if the essay is digressing.

3. The Application of Automated Essay Scoring System in College English Writing Course

The key to exploring the effectiveness of the teaching mode of English writing lies in whether the teachers could combine the English essay teaching theory and the practical classroom teaching, and use the computer and network technology to realize the immediate feedback of essay writing. The teachers should give the students more opportunities to train themselves, and reform the scoring mechanism, making the students' writing mode more effective and independent. And it can also free the teachers from the onerous task, improving the effect of essay teaching in an obvious way. Based on the automated essay scoring system, and combined with the advanced process writing theory, a new and more scientific essay teaching mode can be concluded. The new teaching approach can be divided into four stages: preparation stage, the first draft and mutual evaluation stage, automated scoring and students' modifying stage, and the teacher's evaluation and final revision stage.

(a) The preparation stage. In this section, the teacher is supposed to provide the students a with specific topic according to the title of the essay, or show the topic that needs to be discussed to the students through pictures or multimedia mechanism, and then ask the students to discuss the topic in pairs or groups, after the discussion the students should illustrate all the discussion results, such as related words, ideas, etc. During the discussion, the teacher plays an important role. Teachers should find the problems during students' discussion, and then analyze and solve the problems. Teachers can

distribute model essays or related reading materials to the students. Thus the students can expand their vocabulary during the process of reading, and acquire the knowledge of culture, genre, the discourse expression and cohesive methods. The writing method varies according to different genre structures. So when the students are leaning different genres of the essays, it is important for them to know the specific writing structure and approach. After learning the writing methods of different genres, the students could list the outline of the essay according to the characteristics of the genre before writing.

(b) The first draft and mutual evaluation stage. After the preparation, the students can proceed into the stage of the first draft writing. The teacher should remind the students to try to increase the depth and length of the essay, and avoid the phenomenon of being hollow and the absence of the rationale. After the first draft, the students could begin the mutual evaluation stage. Mutual evaluation is an important step in the process of writing; it is an important way for the students to promote their writing ability through the evaluation between the classmates. First, the teacher should let the students know the significance of the evaluation between each classmates, in this process the students can strengthen their confidence in writing and take a new look at their own essays through the peer review at the same time. Second, the teachers should give the students some practical evaluation standards, making them have a deep understanding about the grammar, discourse and content of the essay during the process of essay correction and evaluation, and thus promote the accuracy and the standard of the evaluation. At the same time, the teachers should encourage students to find out not only the other students' mistakes, but also the advantages in their essays. Teachers should give the students some corresponding guidance during the first several times, but in the later stage the teacher should give the students the freedom to evaluate each other's essays.

(c) Automated scoring and students' modifying stage. Process writing method emphasizes that the students should modify their essays for a lot of times and trains their writing abilities on a brand-new level. Thus the students could realize the transition from passive learning into autonomous learning. After the mutual evaluation stage, the teacher should ask the students to submit their revised essays to the automated essay scoring system. The requirements of the essay scoring system in this design has a submission time limit for the students, the teacher should first put the essay assignment into the network system, and then let the students enter the system to find the essay assignment, and then submit the essay to the system within the time limit. The score of the essays and the proposals for correction will appear on the screen within a few seconds after submitting the essays. This immediate feedback mode enables students to obtain the revision opinion much quicker than before and modify their own essays instantly, thus fully guarantee the effectiveness of the study. After acquiring the scores and revision opinions, the students can modify their essays according to the opinions from the

system and write the second draft, and then submit the revised essays to the system again until they get a satisfactory result. In addition, the students can also browse other writing tasks assigned by the teacher through the system, and get more training opportunities to form their independent writing ability.

(d) The teacher's evaluation and final revision stage. Teachers can download the final revised essays of the students through the network system. The scores and recommendations from the system could also be downloaded. This is very helpful and effective for teachers to give the final grade and evaluation of the students' essay. Teachers could give the final evaluation and score to the students' essays through their intellectual ability and distribute the final result to the students. Teachers can choose some excellent essays and show them to all the students, pointing out its advantages and disadvantages, thus the students can form the impression of the characteristics of a good essay in their brains. The teacher can also let the students re-evaluate and discuss the final results, in this way the students can promote their writing abilities to a large extent.

4. The Potential Problems of Automated Essay Scoring System

Automated essay scoring system is a new way of giving scores to the students' essays, but there are still some problems in the practical application:

(a) The deficiency of students' writing strategies. Because high school English education mainly focuses on the cultivation of the students reading ability and there is little requirement on English writing ability, the students in high schools are always short of writing practice. Generally speaking, the high school students could not master the writing strategies very well. After entering the college, this phenomenon is particularly prominent. During the process of correcting students' essays, we can often find that the discourse structures in some students' essays are not clear and logical. When experimenting the essay teaching mode which is based on automated essay scoring system, we can often note that the discourse structure of students' essays are not very clear and the ideas of the students in the essays are in disorder. So we can conclude that the students' writing strategies were insufficient. Peng Li thinks that writing strategies include language input strategy, macrostructure strategy, imitation strategy, error correction strategy and writing practice strategy. Combined with the five specific strategies, the author made a random oral interview with the students after the experiment. The author found that the students are not aware of the writing strategy; they do not form the habit of drawing outline or draft, and never consider how to arrange the paragraphs. They seldom revise their essays by themselves, when they meet the problem of expressing their ideas, most of the students don't know how to solve it. They are also not good at

imitating and avoidance and the language in their essays are not quite native. While the experimental results confirmed the effectiveness of automated essay scoring system in the essay teaching, but in order to improve the students' comprehensive ability in English writing, we should strengthen the cultivation of students' writing strategies, and let the students learn to write their essays consciously and actively, enjoying the experience of self-improvement and growth.

(b) The teachers need to adjust their roles. The automated essay scoring system can save the teachers a lot of time in correcting students' essays and reduce the pressure of English teachers' work. But because the teachers do not mark the specific errors on the essays of the students like before, some students may think that their teachers' work is not earnest. So, in the process of essay teaching based on automated essay scoring system, the teachers must adjust their roles, using the extra time for a better guidance of students' essay writing. The teachers should give different writing guidance, supervision and feedback according to the students' writing ability, and often communicate with students. The teacher should also understand the student's difficulty in writing, and strengthen the emotional interaction with the students and eliminate the misunderstanding. For the students who are lagging behind, the teachers should pay more attention to the syntactic structure and word collocation in their essays. For the students who do well in writing, the teacher should give the macro guidance of discourse structure and rhetoric devices and make them be aware of cultivating the good writing habits and improve their writing strategy. The application of automated essay scoring system does not mean that the teachers do not have to score and review the student's essays anymore. The role and function of the teachers should be diverse; they could become the helpers, regulators and responders in the students' writing activities.

5. Conclusion

The application of the automated essay scoring system plays an important role in promoting traditional English essay classroom teaching. Currently, the working load for English teachers in China is much heavier than before, so the advantages of the automated scoring system are more apparent. This paper effectively combines the traditional process writing method with the automated essay scoring system, and creates a highly effective essay training mechanism for the students. Of course, during the process of essay teaching, the automated essay scoring system cannot be used only as an auxiliary tool. The teachers should combine the new teaching mode and their own creativity to make the essay teaching classroom more effective.

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