

Computer-Supported Freewriting : Improving Writing Attitude and Idea Generation

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Abstract: Most students in Taiwan feel anxiety or suffering when teachers ask them to write compositions in class because writing might be viewed as a complex problem solving process and they often lack self-confidence in their writing abilities. Pre-writing has been recognized as especially relevant to successful writing at the beginning. Therefore, it is important to make students be willing to write something without fear at the pre-writing stage and improve their writing attitudes. The paper presents a computer-supported freewriting system (CSFWS) integrated with extensive reading pedagogy in order to improve their attitudes toward writing and to facilitate students' writing idea generation. The results show that after participating freewriting activities by the proposed CSFWS system, students become more positive in writing attitudes. Namely, students have more confidence and willingness in writing in their daily school life. The study found that when the difficulty level of writing topic is corresponding to students' writing abilities, students will be more productive. In addition, students' diction in freewriting should be further evaluated.

Keywords: freewriting, writing attitude, idea generation, computer-supported

1. Introduction

Most students in Taiwan feel anxiety or suffering when teachers ask them to write compositions in class, especially for boys. Students dislike writing because they often lack self-confidence in their writing abilities and most of their writings are evaluated for academic achievement, not belonging to themselves. Furthermore, in a conventional classroom writing environment in Taiwan, students write compositions based on an assigned topic within a limited period of time and follow the teacher's guidance and interpretation on how to write well. After receiving submissions from students, the teacher reviews works. Students generally get feedback from the teacher and then put their works aside. Writing itself is more a teacher-oriented job than a student-oriented task (Yang, 2005).

Writing might be viewed as complex problem solving processes. It is important to make a student feel confident as a successful writer. Rohman (1965) divided writing into three processes, including Pre-Writing, Writing, and Re-Writing. Among these writing processes, pre-writing has been recognized as especially relevant to successful writing at the beginning. At the pre-writing stage, teachers can conduct various activities for students to generate writing ideas, brainstorming, or make an outline to support their writing. Within the area of pre-writing study, freewriting has emerged as one of the most useful pre-writing skills. Students just write down whatever comes to mind without regard to spelling, grammar, etc., and make no corrections. The main principle of freewriting is nonstop writing (Elbow, 1973). The way of freewriting will help students in finding interesting topics and in promoting their motivation in writing. Fishman (1997) finds that freewriting is an effective way for students to get started, an opportunity to discover they do have topics they care about. In addition, he indicates that freewriting is a vehicle for developing students'

self-respect, for helping students appreciate their own ability apart from someone else's evaluation.

The aforementioned studies indicated that pre-writing plays an essential role in successful writing for students who lack of confidence in writing. Also, students engaged in extensive reading still get great improvement in writing competency. However, they paid less attention to the integration in pedagogy with both extensive reading and pre-writing. Meanwhile, some studies have shown that the writing with a computer rather than using pen and paper can reduce students' errors (Grejda & Hannafin, 1992) and increase the writing quality (Breese et al., 1996; Lam & Pennington, 1995). Thus, the objective of this study is to develop a computer-supported freewriting system integrated with extensive reading pedagogy in a digital classroom, for students generating writing ideas, establishing confidence in writing, and building positive attitudes toward writing.

2. System Design

2.1 System Architecture

According to above motivation and literatures, we design a computer-supported freewriting system (CSFWS) for enhancing students' writing idea generation and promoting their writing attitudes. The CSFWS was designed based on the previous work on digital classroom environment framework (Liang, 2005) and includes a courseware server, client learning system and real-time synchronized agent. Figure 1 shows the detailed system architecture. The client learning system which consists of four software agents and one login interface can provide the same theme articles for learners to stimulate their writing ideas and then to quick write down ideas with freewriting strategy. It is not only increasing learners' reading skills but also stimulating their writing idea generation. The courseware server, which contains three software agents, two databases, and one management interface, is responsible for supporting a teacher to control learning activities and providing a user-friendly interface for a teacher to manage the required theme-based reading articles and associated vocabularies. Moreover, to support the class-wide learning pace and the monitoring function, the real-time synchronized agent is necessary to be in charge of keeping learners' learning statuses real-time for the teacher monitoring and letting learners in the same learning procedure. In this work, the real-time synchronized technique provided in Flash Communication Server was employed to perform this work.

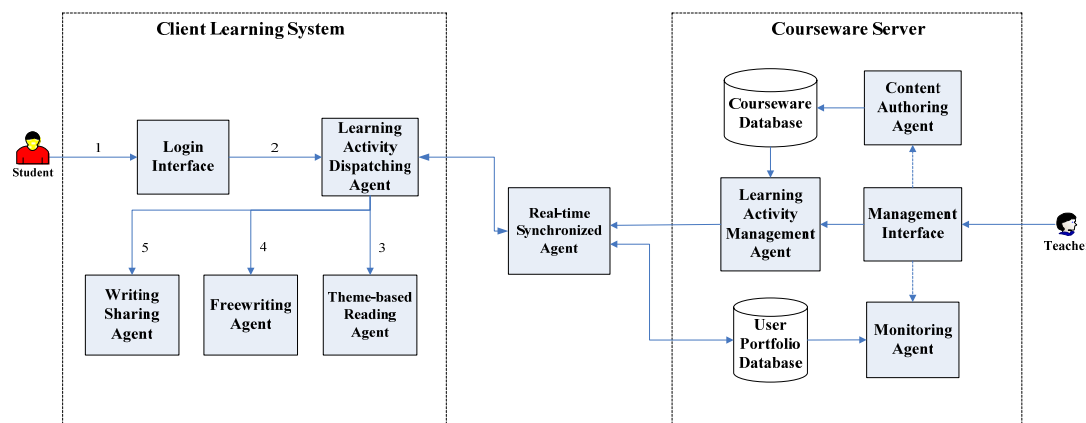


Figure 1. The system architecture of the proposed CSFWS system

2.2 The learning procedures through the client learning system

We designed and implemented the CSFWS system to support a freewriting activity in a digital classroom. For a freewriting activity, the learning procedures basically are based on a student-centered philosophy. We try to let students have much more time to engage in their learning, that is to say, teachers talk less, students practice more. According to this rationale, the details of learning procedures of freewriting activity are illustrated as Figure 2, and described as follows:

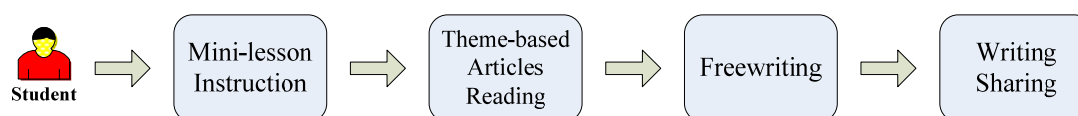


Figure 2. The learning procedures of freewriting activity through the client learning system

- Step1. At the every new topic of freewriting activity beginning, the teacher can give some introduction, writing guidelines, or key points of today's lesson as a mini-lesson instruction. A mini-lesson focuses on a specific teaching point and lasts five to ten minutes, not too long. Mini-lessons are ideal for quick lessons leading to active engagement. That is, in the mini-lesson instruction session, the teacher can only instruct one or two teaching points what students have to learn in less than ten minutes.
- Step2. In order to stimulate students' writing ideas and supply students' background knowledge, we prepare six themes of freewriting and each theme is arranged four relative articles for students to read. In theme-based articles reading, students can quick read these articles and get writing inspiration or ideas from such relative articles. Furthermore, they can acquire new vocabularies by the vocabulary explanation function, which shows the phonic, meaning, and example of the vocabulary.
- Step3. After immense stimulation and input from reading, students can easily jotting down whatever comes to mind at the time. The good phrases from the previous read articles would be recommended and shown to students for reference, if students are willing to use some good phrases in their freewriting. However, the most important requirement is that students never stop lasting ten to fifteen minutes. In such a time, students are engaged in freewriting and are productive.
- Step4. The teacher can carry out a writing sharing activity depending on the time left. In the sharing interface, all freewritings by students are anonymous because the freewriting is mess and would not be evaluated suggested by Peter Elbow. In addition, students would not feel anxiety from peer pressure and would be more confident in their freewriting.

3. Experiment

3.1 Participant

Participants were 32 children at fourth grade in a primary school in Taiwan. There were 15 males and 17 females. Children were native speakers of Chinese and were in the same class. Most of the children came from working class families. Children had basic computer skills

learnt from computer classes for one year at school, but had no writing experience with netbooks. The experiments were conducted twice a week for three months and each time was lasting forty minutes. Also, the writing attitude and the writing idea were evaluated.

3.2 Analysis

3.2.1 Writing attitude measurement

To evaluate students' attitudes toward writing, a writing attitude measurement referred to Jeng's research (1995) and was modified. The measurement is four-point Likert scale and involves thirteen questions divided into three dimensions, including writing affection, writing practice, and writing expression. The pre-test and pos-test of writing attitude measurement were conducted and twenty six students' data were validated. the paired sample t-test statistics was used to analyze the results of the pre-test and post-test. Table 1 lists the paired sample t-test statistics information (N = 26).

Overall speaking, this study found that the difference of the mean scores between the pre-test and post-test is 0.26 and the results reach the significant level under the degree of freedom is set to 25 ($t = 4.85$, $p < .05$). In other words, after learning freewriting with the proposed CSFWS system, the changes of participants' writing attitudes are positive and achieve significant level. For detail, the writing model of this study in terms of writing attitude not only effects on participants' writing affection dimension ($t=3.82$, $p<.05$) but also effects on their writing practice dimension ($t=2.99$, $p< .05$) and writing expression dimension ($t=2.83$, $p<.05$). That is, participants show more confidence and willingness in writing and they feel that writing is not a hard work and can accomplish compositions by their own.

Table 1. The paired sample t-test for both the pre-test and post-test scores
Paired Samples Test

Posttest-Pretest of dimensions	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
writing affection	0.31	0.41	0.080	3.83	25	0.001
writing practice	0.22	0.37	0.071	2.99	25	0.006
writing expression	0.24	0.44	0.085	2.83	25	0.009
Total	0.26	0.27	0.053	4.85	25	0.000

3.2.2 Writing ideas analysis

All ideas of students' freewritings were coded by two Chinese language experts. The correlation is high ($r=.789$). Twelve writing topics were divided into three levels of difficulty, high, moderate, and low, according to students' feedback. All participants also were grouped into two groups, high achievement and low achievement, based on their last term grades in Chinese. As shown in Figure 3, at high level of difficulty, the writing ideas, in general, in both two groups are performed better in Ch12 than in Ch4. That is, students can gradually produce more ideas in the freewriting session. At moderate level of difficulty, for both high and low achievement groups, students generated the most amounts of ideas among these three difficulty levels. It seems to be that students have more thoughts and create more ideas at the appropriate difficulty level. At low level of difficulty, the trend of curves is not intended to increase. Students did not perform well, especially in last two topics. We found that students intended to describe more in words for one event or one idea, not to get ideas diversely at the low level of difficulty topics.

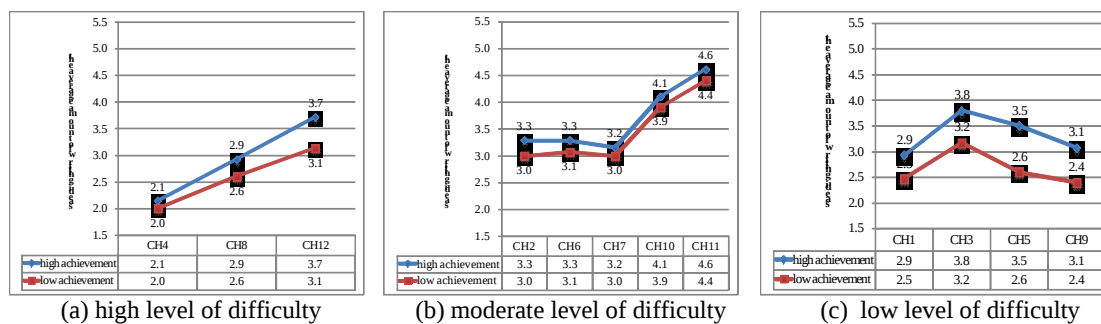


Figure 3. The average amount of ideas generation

4. Conclusion

This study proposes a computer-supported freewriting system (CSFWS) integrated with extensive reading pedagogy to improve their attitudes toward writing and to facilitate students' writing idea generation. The results show that after participating freewriting activities by the proposed CSFWS system, students have more positive attitudes toward writing, not only in the writing affection dimension but also in the writing practicing and in the writing expression dimensions. Namely, students have more confidence and willingness in writing in their daily school life. Furthermore, theme-based articles reading can immediately supply students' background knowledge for writing and stimulate their idea generation. In terms of idea creation, the study found that when the difficulty level of writing topic is corresponding to students' writing abilities, students will be more productive. In addition, students' diction in freewriting should be further evaluated. It would be interesting to see how many vocabularies or phrases students learnt from theme-based articles reading were used in their writings.

Acknowledgements

The authors would like to thank the National Science Council of the Republic of China, Taiwan, for financially supporting this study under Contract No. NSC-99-2631-S-008-001.

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