

How Reading-Writing Model to Facilitate Writing Idea and Affect Writing Attitude at Prewriting

Shih-Hsun Hsu*, Jen-Hang Wang, Chan-Chio Lao, Tak-Wai Chan

*Graduate Institute of Network Learning Technology,
Department of Computer Science & Information Engineering,
National Central University, Taiwan*

*jason@cl.ncu.edu.tw

Abstract: Learning technologies viewed as learning tools, such as smart phones or netbooks, are increasingly applied to support classroom language learning for teachers and students to conduct a more effective and appealing activity. Recent studies indicated that writing anxiety is a widespread phenomenon in classrooms, especially in Taiwan, and the attitude towards writing critically affects the motivation and performance in a writing task. How to make students engage in their writing and how to encourage students to write more without fear are issues to be concerned. In this study, a computer-supported reading-writing learning system was implemented to support the proposed “2Rs” learning framework—freewriting conjoined with theme-based reading— in a one-to-one digital classroom. This study also conducted an empirical evaluation and the results showed that “2Rs” learning could significantly improved participants’ attitudes to the interest in composition, the confidence in writing competency and idea generation, and the sense of writing ownership. Such results suggest that “2Rs” learning in one-to-one environment may be a potential avenue for motivating students to read more, think more and write more in the language arts learning activity.

Keywords: reading-writing, writing attitude, writing idea generation, one-to-one

Introduction

In recent decades, the foci of writing instruction approaches have been shifted from the views of behaviorism to cognitive or socio-cultural perspectives [10][17]. An affective factor, an influential element, affects all phases of the writing process [16]. For example, regarded as an affective factor, students’ attitude toward writing was found critically affecting their motivation and performance in a writing task [11]. Writing attitude is highly related to writing achievement [1]. Nevertheless, when we look first at the problem with the students’ writing, writing apprehension or writing anxiety is a widespread phenomenon in students writing [5]. In particular, apprehensive writers would try to avoid both writing tasks and instruction and, as a result, do not have sufficient practice to develop as proficient writers [7]. The students who have high level of anxiety on writing tasks will reflect in their attitude and behavior toward writing as well as in their written artifacts [12]. The writing attitude seems to be concerned in priority for teaching composition.

Writing might be viewed as complex problem solving processes. Most language learners at all levels believe that writing is one of the most difficult language skills to master [15]. Rohman (1965) [18] divided writing into three stages, including Pre-Writing, Writing, and Re-Writing. Among these writing stages, the pre-writing has been recognized as relevant to successful writing at the beginning, especially for those novice or struggling writers [2]. Within the area of pre-writing study, freewriting has emerged as one of the most effective pre-writing skill [13]. Students just write down whatever comes to mind without regard to spelling, grammar, etc., and make no corrections. The major principle of freewriting is nonstop writing without editing or looking back [6]. The way of freewriting will make writing less blocked and help students past the barriers of beginning to write, and then makes them confident in that they have something worthwhile to say as well as promoting

their motivation and attitude toward writing. Fishman (1997) [8] finds that freewriting is an effective way for students to get started, an opportunity to discover they do have topics they care about.

On the other hand, reading and writing are complementary and constructive processes. Many researchers have viewed reading and writing as more connected relationship. It is believed that both reading and writing rely on a common base of knowledge [9]. When it comes to the connection of reading and writing, students as readers can gain considerable prior knowledge or experiences from text for their subsequent writing as well as the audience awareness can be evoked to help writers to anticipate miscommunication or confusion and, thus, to write better. Meanwhile, students who were excused from writing assignments but engaged in extensive reading still evidenced large gains in writing ability [4]. Moreover, even at the prewriting stage, reading paired with prewriting before composing was evidenced to be the most effective prewriting instructional strategy on students' compositions [2]. The integration of reading and writing in instruction is able to bring great benefits to students, having better reading comprehension and writing fluency. To address the aforementioned issue, there are two main research questions: (a) how is the effect of the "2Rs" learning system toward students' writing attitude? (b) how does the "2Rs" learning system affect students' writing performance, especially in ideas generation at prewriting?

1. "2Rs" Learning framework and learning scenario

This study is one part of One-to-One Digital Classroom Project in Taiwan. The term "one-to-one" means that each student has one or more than one mobile learning device to support or enhance a student's learning [3]. In addition, under this project, a student can use a lightweight notebook to learn not only language art but also mathematics in and out of school. However, the domain subject of this study is dealing with Chinese composition, especially emphasizing on a student's affective aspect and writing ideas generation at prewriting. There was a pilot study and we designed and implemented the computer-supported learning system to support a freewriting activity in a digital classroom [14]. We believed that the way of extensive reading and writing—considerable input and output—would play a critical role in language art learning and effectively increase a student's language ability. In this study, in order to stimulate a student's writing idea and abundantly supply background knowledge, we conducted the further investigation and organized seven themes for compositions and each theme had two or three subtopics for students to freewrite ideas down as well as four relative articles corresponding to each freewriting subtopic are arranged for students to read. Furthermore, they can acquire new vocabularies by the vocabulary explanation function, which shows the phonic, meaning, and usage example of the vocabulary. After inspiration and input from reading, students can easily jot down whatever comes to mind at the time. The major requirement is that students never stop writing lasting for ten to fifteen minutes. In such a time, students are engaged in freewriting and are productive.

2. Method

2.1 Participants

Participants were 29 pupils at third grade of a primary school in Taiwan. All students were all native speakers of Chinese and were in the same classroom. At the beginning of the school year, the class was newly assembled in a normal distribution from all third grade students. All children were assigned netbooks as their learning devices to conduct one-to-one digital classroom project. The school was viewed as a rural school district and most of the children came from working class families. The experiments were conducted twice a week for two semesters and each time lasted about forty minutes in one class. At the

beginning, we also held a Chinese typing training program around two months in order to make sure that all participants can type Chinese characters fluently and their thoughts won't be blocked due to typing input. At the end of training program, participants' Chinese typing speed on the average is 17.9 characters per minute higher than 12.3 characters for hand-write speed.

2.2 Satisfaction towards the computer-supported "2Rs" learning experience

The satisfaction questionnaire was designed in four-point scale format to assess the level of learning satisfaction and motivation of "2Rs" learning experience. Twenty-eight copies were validated in the survey. Table 1 shows the results of the students' responses to the questionnaire. Analysis with one-sample t-test, using 2.5 as the expected mean, found that all items were statistically significant at the 0.05 level ($p < .05$).

Table1. The results of the questionnaire towards the "2Rs" learning experience

Item (N=28)	Mean [#]	SD	t-value	p-value
1. After theme-based reading, it can stimulate me more writing ideas in freewriting.	3.36	0.78	5.8	0.000
2. In theme-based reading session, the explanation of vocabulary prompted by the system can help me quick understand the difficult words in the articles.	3.43	0.57	8.6	0.000
3. In theme-based reading session, I often use vocabulary prompt function to acquire new vocabularies.	2.96	0.88	2.8	0.010
4. I always follow the strategy of freewriting to write down my ideas.	3.39	0.57	8.3	0.000
5. I feel more confident in writing through the way of freewriting.	3.39	0.74	6.4	0.000
6. I feel less fear about composition through the way of freewriting.	3.00	0.86	3.1	0.005
7. In freewriting session, no matter how hard I try, I still don't know what to writing down. (Reverse item)	2.04	1.00	-2.5	0.021
8. In freewriting session, I have quite a lot of ideas which cannot write down in time due to my slow typing speed. (Reverse item)	1.96	1.14	-2.5	0.019
9. In freewriting session, I get a great sense of accomplishment when I write more ideas in words.	3.39	0.79	6.0	0.000
10. It is much easier to write in a way of freewriting paired with reading than of directly composing an essay.	3.39	0.69	6.9	0.000
11. After two semesters of "2Rs" learning, I feel more interested in composition.	3.07	0.94	3.2	0.003

[#] 1 = Strongly disagree; 2 = Disagree; 3 = Agree; 4 = Strongly Agree

From the function of system feasible aspect, although only 67.9% of the students agreed that they often use the vocabulary prompt function to acquire new words, more than 95% of the students rated positively and stated that the explanation of vocabulary prompted by the system can really assist them to overcome the difficult words in the articles immediately. In addition, 96.4% of the students gave high positive responses, in terms of freewriting, to reveal that they appreciate the strategy of freewriting, which makes them fear less about composition as well as become more confident in writing. Moreover, when students success in writing ideas generation, they will get a great sense of accomplishment. 82.1% of the students indicated that reading can really stimulate them to write down more ideas during freewriting session. Namely, it shows that reading can benefit writing ideas generation. On the other hand, 75% of the students also showed that typing speed would not affect their writing ideas output because of two months of Chinese typing training. Most important, in regards to "2Rs" learning, 89.3% of the students expressed that freewriting conjoined with theme-based reading pedagogy makes composition much easier than usual in school and consequently students become more interested in composition. On the whole, students gave high appreciation to the proposed "2Rs" learning activity design which can lower writing barriers to lead successful writing and positively affect student's attitude toward writing.

2.3 Writing ideas analysis of freewriting

In order to realize students' performance in freewriting, we tried to analyze their writing ideas of freewriting. Figure 1 shows the results of writing ideas analysis. Each line segment means one theme of a composition including two or three relative subtopics (e.g., T01 and T02, T07, T08 and T09) and there are 16 freewriting subtopics for seven compositions. Ideas of students' freewritings were coded by two Chinese language experts. An idea of writing is defined as a proposition that can clearly convey information and meaning of though. When a student writes a sentence involving different characters, events, time, spaces, etc., we will calculate it as different writing ideas. One third of total samples (six subtopics of freewritings) were coded by one expert, and another, meanwhile, coded all freewritings. The Spearman correlation was conducted to validate consistency and the correlation coefficient turned out to be a very high .97 ($r=.970$, $p < .01$).

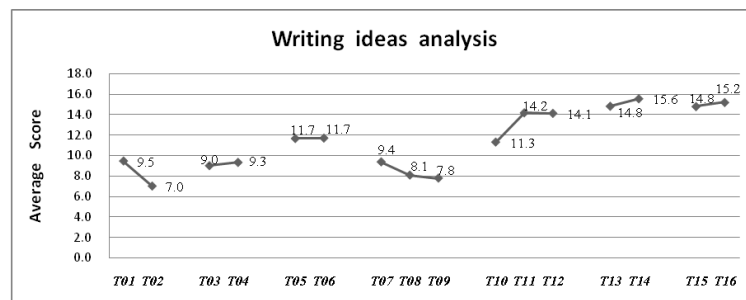


Figure 1. The results of writing ideas analysis of freewriting

As shown in Fig. 1, we found that the number of ideas on average, overall, is from 7.0 to 15.6, and most of the line segments go up except the lines of theme #1 (T01, T02) and theme #4 (T07, T08, T09). The finding shows that students can gradually produce more ideas through the proposed “2Rs” learning as the experiment progresses. In other words, the theme-based reading can stimulate students to think more and recall much experience as well as freewriting makes student write fluently without thinking too much and just jotting down whatever comes to mind. However, for theme #1, ideas inclined to go down because students were not quite familiar with freewriting, and we found that most students at T02 seemed to hesitate to write down any clue in mind, even some useless ideas. They still tried to use elegant words and forced themselves to write perfect sentences. After continuously training, the situation went better. On the other hand, for theme #4, we found that it was concerned with a topic issue. The theme #4 was talking about “what will you be in the future” and the theme was abstract for them in comparison to the other themes, such as “school athletic meet”, “the experience of going to see a doctor”, “my teacher”, “an impressive experience”, “thank you for giving me help” and “a wonderful trip”. According to the field observation, we found that for Grade 3 students, they are just familiar with limited occupations, mostly from parents' jobs or the teacher. That is why students generate limited ideas at subtopics of T08 and T09, and describe less in words about future careers. In general, the trend of students' performance on ideas is increasing.

3. Conclusions

In this study, a computer-supported reading-writing learning system was implemented to support the proposed “2Rs” learning activity in a one-to-one digital classroom. Seven themes for compositions including sixteen subtopics for freewriting learning materials were also designed. The results of the empirical study show that using “2Rs” learning system improved students' writing performance, especially in ideas production at a prewriting stage. Furthermore, the theme-based reading can immediately supply students' background knowledge for writing and stimulate students to think more as well as freewriting makes

student write fluently without fear. The findings in terms of writing attitude show that the “2Rs” learning pedagogy can positively affect students’ attitude toward writing. More specifically, students are more awareness of attitude changes in daily’s writing practice. They would be willing to spend more time on writing or discuss writing with classmates in school. Students also indicated that their thinking would not be blocked through the freewriting strategy and writing seemed to become much easier than before. Most important, students felt more confident in their writing and showed high interest in composition.

Acknowledgements

This study was funded by the National Science Council of Taiwan, ROC (NSC 99-2511-S-008-002-MY3, NSC 100-2511-S-008-013-MY3, NSC 100-2631-S-008-005-) and by Research Center for Science and Technology for Learning, National Central University, Taiwan.

References

- [1] Bartscher, M. A., Lawler, K.E., Ramirez, A.J., & Schinault, K.S. (2001). Improving student’s writing ability through journals and creative writing exercises. Master of arts action research project reports, Saint Xavier University, Chicago.
- [2] Brodney, B., Reeves, C., & Kazelskis, R. (1999). Selected prewriting treatments: Effects on expository compositions written by fifth-grade students. *Journal of Experimental Education*, 68(1), 5-20.
- [3] Chan, T. W., Roschelle, J., His, S., Kinshuk, Sharples, M., Brown, T., Patton, C., Cherniavsky, J., Pea, R., Norris, C., Soloway, E., Balacheff, N., Scardamalia, M., Dillenbourg, P., Looi, C. K., Milrad, M., Hoppe, U., & G1:1 Members (2006). One-to-one technology enhanced learning: An opportunity for global research collaboration. *Research and Practice in Technology Enhanced Learning*, 1 (1), 3-29.
- [4] Crowhurst, M. (1991). Interrelationships between Reading and Writing Persuasive Discourse. *Research in the Teaching of English*, 25(3), 314-338.
- [5] Daly, J., & Miller, M. (1975). The empirical development of an instrument to measure writing apprehension. *Research in the Teaching of English*, 9, 242-249.
- [6] Elbow, P. (1973). *Writing without teachers*. Oxford: Oxford University Press.
- [7] Faigley, L., Daly, J. A. & Witte, P. S. (1981). The Role of Writing Apprehension in Writing Performance and Competence. *Journal of Educational Research*, 75, 16-21.
- [8] Fishman, S. M. (1997). Student writing in philosophy: A sketch of five techniques. *New Directions for Teaching and Learning*, 69, 53-66.
- [9] Fitzgerald, J. (1992). *Towards knowledge in writing: Illustrations from revision studies*. New York: Springer-Verlag.
- [10] Flower, L. S., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication*, 32(4), 365-387.
- [11] Graham, S., Berninger, V. & Fan, W. (2007). The structural relationship between writing attitude and writing achievement in first and third grade students. *Contemporary Educational Psychology*, 32(3), 516-536.
- [12] Hassan, B. A. (2001). *The Relationship of Writing Apprehension and Self-Esteem to the Writing Quality and Quantity of EFL University Students*. Pamietta, Egypt : Mansoura University.
- [13] Hayes, J. R. (2006). New Directions in Writing Theory. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Ed.) *Handbook of Writing Research* (pp. 28-40). New York, United States: Guilford Press.
- [14] Hsu, S. H., Wang, J. H., Lao, A. C. C., & Chan T. W. (2010). Computer-supported freewriting: improving writing attitude and idea generation. *The 18th International Conference on Computers in Education 2010*, Malaysia.
- [15] Kurt, G. & Atay, D. (2007). The effects of peer feedback on the writing anxiety of prospective Turkish teachers of EFL. *Journal of Theory and Practice in Education* 3 (1), 12-23.
- [16] McLeod, S. (1987). Some thoughts about feelings: The affective domain and the writing process. *College Composition and Communication*, 36, 465-471.
- [17] Nystrand, M. (1989). A Social-Interactive Model of Writing. *Written Communication*, 6(1), 66-85.
- [18] Rohman, D. G. (1965). Pre-Writing the Stage of Discovery in the Writing Process. *College Composition and Communication*, 16 (2), 106-112.