Exploring the Effect of Writing Mini-lessons on Peer Response in Elementary Classroom

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Abstract: Previously, the research team designed a game-based writing environment to support students' writing development. However, students are not good at peer response. It decreased the effect of talking for revising strategy. Therefore, the purpose of this study designed writing mini-lesson and enhanced students' skill of giving peer response and revising their draft based on the received response. A quasi-experiment was conducted and 108 three-grade students from 4 classes participated in. The experimental group received the three writing mini-lessons during the semester and the control group received general instruction. Both of these two group students wrote three writing article on game-based writing environment. The writing mini-lesson was implemented in the beginning of every writing course and cost around 5-8 minutes. The results showed that there is no significant different on the number of peer response between control and experimental group. In contrast, the type of peer response was different between these two groups. It implied that writing mini-lesson could provide students how to give concrete response and proved the effect of writing mini-lesson for elementary school students.

Keywords: Game-based Writing Environment, Writing, Mini-Lesson, Peer Response

1. Introduction

It is important for students to improve their knowledge and skills by learning and practicing. Students understand specific field of knowledge through learning and students reinforce specific field of knowledge through practicing. Writing is an important learning tool which students could write to learn and record their experience (Klein, 2000), because writing could let students to understand difficult content, to arrange and organize the content, and even construct new knowledge. Similarly, in the domain of writing, students also need to learn and practice the skills of writing. After several years of development and testing, our research team proposed an integrated writing activity and game-based learning approach into a game-based writing environment, entitled Creation-Island (Liao, Chang, & Chan, 2015). This game-based writing environment provides opportunities to encourage students to learn and practice the writing model which integrates reading, creating, talking, and revising activities. Our team also has implemented the game-based writing environment in serval elementary schools to enhance students for three years (e.g., Chang, Liao, & Chan, 2014) and gained the effect of improving students' writing performance (Liao et al., 2015).

In previous studies, our team attempted to design some mechanisms to assist students to learn how to give peer responses through from a series of scaffolding which system provided (Chang, Liao, & Chan, 2014). Although we obtained some initial results, there are still many problems which needed to improve, such as the process of peer review, the level of peer discussions, and so on. In addition, from our observation in the practical classrooms, we also found that students still feel confused with peer response: how to give suitable peer response, or how to revise the draft based on receiving peer response, or how to give different aspects of peer response? In other words, students are not good at giving peer responses and revising their draft according to peer responses. Some of the teachers worried that students lack the skills of peer response and revising so the effect of talking for revising strategy could be limited.

Moreover, many study have emphasized on the power of peer response (e.g., DiPardo, & Freedman, 1988; Graham, & Perin, 2007), but it is difficult to organize effective good peer response groups. DiPardo & Freedman (1988) meta-reviewed many studies and indicated that there are several kinds of social interaction in the process of peer response. Thus, some studies investigated how those interactions relate to the larger instructional context and then developed the method to teach and learn in the groups (Rohrbeck, Ginsburg-Block, Fantuzzo, & Miller, 2003). It is difficult to optimize students' feedback of peer response; because teachers would face some constraints in the classroom, such as time management, class management and appropriate assessment when they implement the instruction of peer response in writing course.

In order to resolve the constraints in classroom, some studies proposed the concept of mini-lessons which present simple, easy, and useful information to a class or group in a brief format (e. g., Atwell, 1987). The mini-lesson is a brief 5 to 10 min lesson which is taught at the beginning or at end of the process (Au et al., 1997). In particular, about writing mini-lesson, the design of mini-lessons typically involves students in trying out or applying the concept of writing, briefly and interactivity, in order to promote one aspect of writing (e.g., prewriting strategies, drafting/revising strategies, peer reposing strategies, and editing their pieces of writing). Some studies (Jasmine, & Weiner, 2007) indicated that mini-lesson possible can improve the abilities of students to become confident and independent writers.

Hence, the purpose of this study is to design writing mini-lessons to guide students be a good assessor and assesse, to give suitable feedback and revise their draft, and to examine the effect of writing mini-lesson. In other words, writing mini-lessons taught, practiced or applied, then tested, final refined. In particular, our research goals, as follows: First goal is to design a series of mini-lessons of peer responses for elementary school students. For examples, how to give peer response; how to revise the draft based on receiving peer response; and how to propose different aspects of peer response. Second goal is to examine the effects on mini-lessons of peer responses, such as the number, type, and level of peer responses.

2. Research Method

2.1 Participants and Research Design

The participants were 108 three-grade students from 4 classes in an elementary school, located in a lower middle-class area in Taoyuan, Taiwan. The elementary school was a digital school and had complete online learning environment. Every student owned one laptop and learned typing skill from first-grade. The students were assigned to an experimental group and a control group. Both of two group were conducted twelve writing course and wrote three writing topics on Creation-Island. The experimental group received 3 mini-lesson about peer response and the control group received general writing course. There are 54 students in each group.

2.1.1 Writing Topics

Before starting the writing courses, we discussed with the four teachers. Both experimental group and control group teachers decided the writing topics. The writing topics were used in two groups. The writing topics were a field trip, the experience about nature, how to saving water. The teachers also selected suitable theme-base texts and generated guided question.

2.2 Game-based Writing Environment

Creation-Island is a game-based writing environment to support students' writing development. The online writing system combines a scaffolded writing and rewriting model which includes 4 kinds of activities: reading, creating, talking, and revising (RCTR). RCTR mainly promotes students to write and rewrite by 2 composition strategies: reading for creating and talking for revising (Liao, Chang and Chan, 2015). First, reading for creating strategy contains two activities: 1) theme-based reading: teachers developed writing materials, including four texts relevant to a writing topic and several guidance questions. The system provides mark function which students could highlight points on the

texts. Theme-based reading provides students rich background and different viewpoint of the writing topic. 2) free-writing: students can freely generate lots of ideas through their experiences, thoughts, reading theme-based texts and answering the guidance questions, and then organize those ideas to produce a draft. Second, talking for revising contains also two activities: 1) peer response: students play the role of assessor and give feedback after reading their classmates' draft. The system provides scaffolding peer response function which students could use the incomplete sentence to present their thoughts and to response the draft. 2) Revising: students receive the feedback and then they could revise and edit the article. Creation-Island provides scaffold peer response function that student could use it and complete the sentences (see Figure 1.)
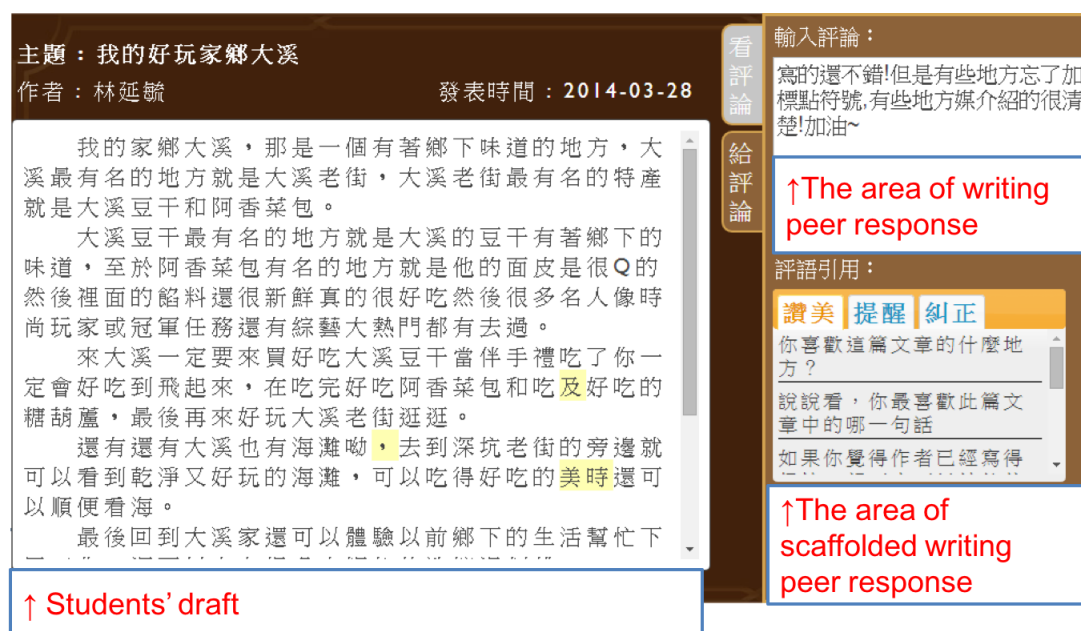

Figure1: The function of Creation-Island supporting students peer response

2.3 The Development of Writing Mini-Lesson

The core of writing mini-lessons is to enhance students' the ability of assessor and assessee in peer response activity. The writing mini-lessons included teacher's explanations, demonstrations, and guides for students' RCTR activities. The writing mini-lessons were designed by the research group and discussed with the teachers in experimental group. Each mini-lesson took approximately 8 minutes to complete.

There are three elements in the writing mini-lessons, including concept explanation, example demonstration and evaluation. The details of the mini-lesson elements are followed: (1) Concept explanation: teachers presented teaching outline according to the teaching theme and help students know the notion, process and effectiveness of peer response. The writing mini-lesson themes contain how to give peer response, how to revise the draft based on receiving peer response, and different aspects of peer response. (2) Example demonstration: teachers provided real examples of the three writing mini-lesson themes to discussion with students. The real examples acquired from students writing products and included good and poor examples. Therefore, the students had opportunities to practice peer response. (3) Evaluation: in order to understand the status of students' learn, teachers use oral evaluation to assess students' performance.

2.4 Data Collection and Analysis

Data collection of peer response in this study could be divided two standards, the number, and the type of peer response. The detailed described as followed. (1) the number of peer response: We calculated how many peer responses that students receive in one article. As students were taught by the mini-lesson, students should give more peer response than before the mini-lesson. (2) the type of peer

response: We compared students' peer response types to understand the effect of writing mini-lesson. The types of scaffolded peer response were affective response, suggesting response, editing response. The types of peer response were analyzed by which scaffolded writing peer response students used. Two researchers analyzed the types of peer response and the internal reliability of the was .95.

2.5 Research Process

In the first semester of students' three grader, all students were wrote article on the writing platform, which named Creation-Island. All students were familiar with the operation on Creation-Island and RCTR model. In the beginning of the second semester, we recruited four teachers and their students to participate in the study. We discussed with the four teachers and decided the writing topics. Then, we designed the writing mini-lessons according to students' performance and regulated the content of writing mini-lessons according to the opinion from the experimental group teachers. The two experimental group teachers were proficient the concept of mini-lesson and the content of peer response. When experimental group students received the mini-lesson, the control group received the general instruction what teachers instructed according to students' writing need. Both the two group students wrote three articles on game-based writing environment.

3. Results

3.1 The Quantity of Students' Peer Response

In order to understand the effect of the three min-lessons, the number of peer responses which students received was calculated. The results showed that experimental group received significantly more average number of peer response than control group on only the second writing topic, the experience about nature (9.22>6.54). Next, we would analyze the type of peer response.

3.2 The Type of Students' Peer Response

Creation-Island provides three kinds of peer response scaffolding, however, the students not only used the peer response scaffoldings, but also developed their peer response. Hence, the all peer responses were classified four types: affective response, suggesting response, editing response, entirety response, and others. Entirety response means students' response is in connection with the whole draft rather than specific paragraph or sentence. Others response means unable to analyzing.

The results showed as Table 1. In experimental group, the most proportion of peer response type was entirety response in the first writing topic. After writing mini-lessons, the proportion of entirety response was decreased and the most proportion response type was transformed to suggesting response and editing response. It means students' responses gradually were in connection with concrete and definite content. In contrast, the most types of peer response in the control group among the three writing topics were entirety response and affective response. In sum, the effect of writing mini-lessons was providing students various types of peer response and students learned how to give specific comment or suggestion.

Table 1: The types of students' peer responses in two groups

		Entirety	Affective	Suggesting	Editing	Other	Total
1. a field trip	EG	250(50.71%)	100(20.28%)	50(10.14%)	87(17.65%)	6(1.22%)	493(100%)
	CG	277(50.92%)	127(23.35%)	27(4.96%)	98(18.01%)	15(2.76%)	544(100%)
2. the experience about nature	EG	188(37.75%)	114(22.89%)	74(14.86%)	110(22.09%)	12(2.41%)	498(100%)
	CG	160(45.33%)	106(30.03%)	26(7.37%)	53(15.01%)	8(2.27%)	353(100%)
3. how to saving water	EG	124(31.23%)	116(29.22%)	60(15.11%)	84(21.16%)	13(3.27%)	397(100%)
	CG	170(44.04%)	146(37.82%)	14(3.63%)	40(10.36%)	16(4.15%)	386(100%)
Total	EG	562(40.49%)	330(23.78%)	184(13.26%)	281(20.24%)	31(2.23%)	1388(100%)
	CG	607(47.31%)	379(29.54%)	67(5.22%)	191(14.89%)	39(3.04%)	1283(100%)

4. Conclusion and Discussion

The purpose of this study is to improve students' peer response through the intervention of writing mini-lessons. The content of peer response includes how to give peer response, and to consider difference viewpoint and to revise their draft according to the response. The elements of mini-lesson were the same, including concept explanation, example demonstration and evaluation. Comparing experimental group and control group students' performance, the quantity was not difference between these two groups. We suspected the design of Creation-Island that students should give at least three students feedback and finish the activity in the game-based environment. In other words, almost every student completed the minimum requirements. However, it is worth noting that the type of peer response was significant improved by experimental group during the three writing topic.

Writing mini-lessons improve the quality of peer response and we speculated there are three reasons caused mini-lesson successful. First, we divided the concept of peer response into several mini-concept that is easy for students to learn. Students just mastered litter content and practice the skills. It could decrease students' cognitive load. Second, although the content of writing mini-lessons was designed by researchers, the lessons provided appropriate examples which selected from students' articles. The examples were familiar by students and suitable for students' learning level. Third, every mini-lesson would provide the opportunity for students to practice the skills immediately. Besides, teachers could evaluate students' learning performance at once. However, the effect of students' revising according to the peer response didn't be investigated. It is the next challenge for the further study.

Acknowledgements

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