Efficacy on Peer Review in CALL

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Abstract

This research explored the basic writers' perception and qualitative efficacy in essay writing class through peer revision in CALL. The present study folded three main phases in it: computer-mediated, done by unskilled learners, and in dyads (face to face pairs). These phases exploited the merit of the humanistic and interactive peer review as well as the digital phase in word processor and on-lined dictionaries. With open-ended questionnaires, text length, readability score, the number of logical conjunctions was measured to analyze their reader-conscious attitudes of their narrative writings. The results indicated that computers were useful for writing a long story and that peer revision could promote easier, reader-friendly lexical selection. Also questionnaires showed 90% of the peer revision participants supported it. On the other hand, logical conjunctions in their products didn't increase, whereas adversative words such as 'but' and 'however', were constantly used in increasing text size. This comes from L1 interference described in the later chapter.

Keywords: Peer Review, CALL, Rhetoric

1. Introduction

Peer review has been highlighted since 80s with the rising of communicative writing trend as one course of process writing. Mittan (1989) highlighted its merit:

Using peer reviews has made me more aware of students' needs in all the modes of language—reading, writing, listening, speaking, and thinking (p.221).

Valerie & Arndt (1993) characterized peer feedback as:

Many students perceived one of the major advantages of team writing to be enhancement of support, cooperation, and idea. As one student interviewee expressed it: "Two brains work together better than one brain (p.102)".

Lockhart & Ng (1995) supported its critical role in promoting audience consciousness, writer's involvement with readers' expectations, critical and analytic techniques to one's own writing, and positive stance toward writing itself.

However, some studies showed surface level errors (spelling, punctuation, number, or negation) were more inclined to pay attention than global level concerns (context, coherence, transition words, style variety, or ideas relevant to main topic) in studies of unskilled learners (Bridwell, 1980; Faigley & Witte 1981; Chenoweth, 1987). Kashiwagi (2001) also showed the most noticeable changes in peer revision were 'mechanics'.

Then, axiomatically if word-processing software with error-correctional function eliminates the surface level concerns or burden on attention to mechanical affairs, and if face to face peer review in pairs enhance more communicative effect,

(1) Will their attention direct into contents or organization?
(2) Will learners be more reader-conscious and revise works with easier lexicon and more quantitative texts with relevance to main topic?.

2. Background

Computers and word processing were vigorously attempted in 80s and 90s and "achieved the status of centerpiece" (Pennington, 1993). Neu & Scarcella (1991), DiGiovanni & Nagaswami (2001), Owston et
al. (1992), and Phinney & Khouri (1993) espoused the effectiveness of computer-assisted revision: in respect of cognitive prompts (Dailute, 1986; Bangert-Drowns, 1993), increasing number of texts (Etchison, 1989; Greenleaf, 1994), four advantages (Pennington, 1993): quality of written work, writing ability, revision behaviour and affective social outcomes, or integrated positive effects of writing on computers (Pennington, 1995).

Computer-assisted writing has met the need of novice writers (Etchison, 1989; Kozma, 1991). Flower & Hayes (1981) surveyed the cognitive activities of the writing process as a flexible, recursive movement between planning, translating, and reviewing. In questionnaires of this research, almost 90% students in both peer revision and self revision agreed that computer-assisted writing was interesting or "more pleasant than any other activity that I had ever had (comment of a student)." MS Word, which puts an underline on a word needing spell correction or including a grammatical error, was available in order to alleviate cognitive burden to surface level errors. This was where Sommers (1980) claimed that revision with computers got novice Writers more inclined to focus on surface level errors, and so did experienced writers (Lutz, 1987).

In order to strengthen the power of peer revision I chose 'face to face' style so that they could interact with each other quickly and spontaneously. Werfier and Mercer (1996) proposed 'critical in thinking' in group work around computers with the aim to be 'sensitive to the communicative nature of education (p.61)'. As in process writing, Zamel (1982), Raimes (1987) emphasized the 'audience-conscious' attitude; and especially in peer revision, Mittan (1989) emphasized communicative concerns included in its activity by nature: "using peer reviews has made me more aware of students' needs in all the modes of language-reading, writing, listening, speaking, and thinking (p.211)". This also includes three dimensions of 'communication' in it: communication with oneself, communication with peers, and communication with a teacher (Kashiwagi, 2001).

3. Method

The participants enrolled in intermediate spoken English classes were third grade college students in electric engineering and electronics department. They were divided into two groups by their preference: self-revision group (N=16) and peer-revision group (N=62). Six continuous classes were allotted to the present research: first and second classes for brainstorming and making the first draft with a pen and paper, third and fourth for rewriting and editing manuscripts by themselves in a computer room, fifth and sixth for revision in self or peer groups in a computer room. First 10 minutes in each lesson were allotted for key-touching exercises. Participants were allowed to watch English web pages referred to topics, and consult on-lined English-Japanese or Japanese-English dictionaries.

4. Result

4.1. From questionnaires: (open-ended)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Merit (Favorable)</th>
<th>Demerit (Unfavorable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyboarding</td>
<td>1 Able to type beautiful letters</td>
<td>1 Slow key touch irritates, or</td>
</tr>
<tr>
<td></td>
<td>(27.3%)</td>
<td>frustrates me (50.9%)</td>
</tr>
<tr>
<td></td>
<td>2 Easy to paste, move, erase</td>
<td>2 Takes long time (50.9%)</td>
</tr>
<tr>
<td></td>
<td>words (15.5%)</td>
<td></td>
</tr>
<tr>
<td>Computer-assisted writing</td>
<td>1 Spelling or grammatical errors are</td>
<td></td>
</tr>
<tr>
<td></td>
<td>easy to check (60%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 Enjoyable (50%)</td>
<td></td>
</tr>
</tbody>
</table>
4.2. From quantitative Scale

Table 1. Changes of Total Words (N=78)

<table>
<thead>
<tr>
<th></th>
<th>Peer Review</th>
<th>Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 in favor(88.3%)</td>
<td>1 enlightening me in regard to more knowledge (23.3%)</td>
</tr>
<tr>
<td></td>
<td>2 with the same</td>
<td>2 making me discern how different his partner's idea is (18.9%)</td>
</tr>
<tr>
<td></td>
<td>partner next</td>
<td></td>
</tr>
<tr>
<td></td>
<td>time (89.2%)</td>
<td>3 interesting (16.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 I realize how good-natured my interlocutor is (12.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 At a loss what to do for lack of vocabulary, grammatical knowledge, or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>writing expertise (24.4%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 Unable to go farther in case of absence of either participant (10%)</td>
</tr>
</tbody>
</table>

Table 2. Changes of Readability Score (N=78)

Left. Self-Revision (SR); Right. Peer-Revision (PR)
1: 1st class with a pen and paper
2: 2nd class in CALL individually (3rd in total)
3: 2nd class in CALL after self or peer revision (5th in total)
5. Main Findings

As Table 1 shows, computers encouraged students to write more in quantity, or longer texts. They rearranged facts in time order and added examples, detailed description, writer's emotion, and purposes for behaviour, all of which were necessary for narrative writing. Increase in total words ensued from computer-assisted writing, although almost no difference was seen between self and peer revision in total words in every stage. On-lined dictionaries contributed to their changing or adding clearer delineation.

Table 2 shows that peer revision group produced papers with higher readability than self revision group. In peer revision, exchange of ideas made clearer what the writer had insufficiently expressed and notified arbitrary lexical choice. Fixing the eyes on the screen, learners were excited to ask questions, give explanations, persuade his partner, or argue with each other.

Table 3 Transition Words Found in Students' Compositions.

Table 3 gives more categorized information of transitions. The author divides used transitions into three categories: logical, time-ordered, adversative. Looking into adversative transitions, self review group decreased them as stages progressed, while peer revision group represented the similar number in all stages. In addition, self review group got time-ordered transitions increasing in number.

Table 4 is an excerpt from the Table in Nishigaki & Leishman (2001). This shows about 20% of transitions meaning adversative idea were used in their research of non-native writers. Questionnaires tell us other advantages. 4.1.2 and 4.1.3 showed half of all the participants found computer-assisted writing with peers instructive and interesting.

At first key touching gave beginners as much trouble as I had expected, but as they got used to it, they became absorbed in fast and easy 'game'. Especially as to peer revision, almost 90% participants who were engaged in peer revision agreed that it was helpful. Peer revision supporters indicated various virtues: personality of an interlocutor emerged through interaction; an interlocutor had him notice shaded points and compensated for lack of ability,
Table 4 Adversative Transitions Found in Students’ Compositions: used / total transitions (Nishigaki & Leishman, 2001)

<table>
<thead>
<tr>
<th>transition</th>
<th>Pre (%)</th>
<th>Post (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>however</td>
<td>3.7</td>
<td>4.0</td>
</tr>
<tr>
<td>But</td>
<td>19.8</td>
<td>11.5</td>
</tr>
<tr>
<td>On the contrary</td>
<td>0.4</td>
<td>0.9</td>
</tr>
<tr>
<td>(a)though</td>
<td>-</td>
<td>4.0</td>
</tr>
<tr>
<td>total</td>
<td>23.9</td>
<td>20.4</td>
</tr>
</tbody>
</table>

As to text patterns or rhetorical passages, which reflect upon conjunctions, very few changes were observed in the whole process of this research. (Table 4, 5) I conducted $\chi^2$ test in peer review group (n.s., p=0.95) as well as self review group (n.s., p=0.25), though it didn’t show any significance between first and last number of transitions in adversative category. This didn’t represent enough evidence that learners’ notice and attendance were arising to linear passage apart from Japanese ‘circular’ rhetoric pattern. This is reflected upon the comparatively high ratio of the number of concession connectors such as but or however. Therefore we should put emphasis on the number of times

6. Discussion

The present study is rearranged version of Kashiwagi (2003) which exclusively highlighted the merit in computer-assisted peer revision as cognitive trigger to unskilful learners of English. Deeper survey into this previous study in context level exposed connotative problems.

As Hinds (1983) pointed out, Japanese rhetoric included “ki-sho-ten-ketsu” pattern in itself. We additionally had a particle “ga”, which meant wide range of meaning: “and”, “but”, “while”, and “though” (Maynard, 1990) in English. Unskilled learners might transfer this particle “ga” to “but” in English. Another perspective is that in Noya (2003), he pointed out that Japanese “shikashi” is a conjunction “with which we can break down and escape from unuttered preceding and shared understanding so as to start a new topic” (translated by the author). This cultural background causes our contexts to frequently include more “but” or “however” than is needed.

We cannot axiomatically establish ideal figured balance (in percentage) among categorized transitions like logics, time-order, advertise, examples, or etc. However, too much tendency to a specific category will cause readers’ confusion in other rhetorical context and spoil easy understanding of contents by sentence or paragraph level arrangement. Consequently, given that adversatives like ‘however’ and ‘but’ are too often used due to contrastive rhetoric in Japanese, more logical context should be introduced and guided for authentic or universal use.

Admittedly, the outcomes seemed satisfactory in supplying the needs of this study. However, the deeper I probed the writing process, the more grave problems were coming up. Their language competence is about at the 7th grader’s level or at 3rd to 4th grade in STEP (the Society for Testing English Proficiency). The low competence of English forced me to abandon the comparison with ‘pen and paper’ scale frequently conducted in preceding researches. For example, their products were: hardly error-free, abundant in
overlapped and redundant contexts, unrevised from the first draft with complicated terms extracted from a Japanese-English dictionary. Too much dependence on rote translation from Japanese may lead to high barrier in creative writing. Therefore the challenge to disguised efficiency needs peer revision to change those 'dead' drafts into vivid, lively descriptions with reader-conscious and communicative writing stance.

Further study on writing mechanism needs to cover qualitative analysis like contents, organization, vocabulary. The present study cannot adopt orthodox research because of less error free products by unskillful learners. Calculating lexical density and surveying word level along with transitions for clearer contexts would disclose how learners regarded 'communicative, or easy to read'.

References


Greenleaf, C. (1994) Technological indeterminacy: The role of classroom writing practices and pedagogy in shaping student use of the computer. Written Communication, 11, 85-130


Sommers, N. (1980). Revising strategies of student
writers and experienced adult writers. College Composition and Communication, 31, 378-388

Note
1. Easy to check, but many of them claimed they were unable to tell how to correct errors in spite of its sign.
2. About this result I guess they know quite well who is the most friendly to themselves as they are all in third grade, although this figure looks somewhat queer to ESL learners abroad.
3. Actually this was the most serious problem for us. Full participation (no absence) should be the first and last to long-term examination.