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<td>柯周生</td>
<td>Yoshifumi KOHRO</td>
<td>九州国際大学国際関係学論集</td>
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Introduction

The present study as a whole aims to reveal how EFL writers negotiate textual features and contextual resources in composing and how such process of negotiation influences the quality of their compositions. This study also attempts to clarify how variables assumed to affect L2 composition, including L2 proficiency and educational background in L2 composition, are related to other critical factors regarding dialogic negotiation of text and contexts.

This paper is the continuation of the two previous ones (Kohro, 2009; 2010). The former one portrayed the theoretical foundation of the entire study and elaborated on the concept of dialogic writing, using Linell’s (1998) dialogic perspective on communication, on the basis of which the entire study is constructed. The latter one introduced a limited number of previous studies on ESL writing conducted in this perspective, discussed variables affecting L2 composition, and presented its research questions with rationales, along with its epistemological foundation. The present paper deals with the research method and data analysis procedure to be

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employed for the entire study. The guiding epistemology and the research questions portrayed in the last paper (Kohro, 2010) will be reiterated below so that the scheme of the present research can be traced easily.

**Method**

This section describes the research method and data analysis procedure for the study. First, it will provide the guiding epistemology of the study on which the entire research design is established. Then, the methods and data analysis procedure to be employed will be discussed for the following three components of the investigating part of the entire project: 1) process tracing; 2) correlation analysis between variables in ESL writing, and 3) synthesis of data to build a descriptive model.

*Design of the study*

The primary research design of this study comprises three parts: 1) the preparatory part of generating research questions (already discussed in the last paper (Kohro, 2010); 2) the investigation part of data collection and analysis; and 3) the follow-up stage of critical review or revisit of the entire research. The three parts of the data collection and analysis are: 1) process-tracing of ten EFL students writing in the authentic genre in their discourse community; 2) correlational analysis between text, contextual resources and major variables affecting EFL writing; 3) synthesizing results from the two sources above in order to make a descriptive model of how
EFL writers negotiate contexts utilizing textual features under the influence of critical variables in L2 writing.

The following research questions raised in the last paper (Kohro, 2010) are intended for the investigation part of data collection and analysis:
1) How do EFL learners use textual features and contextual resources in negotiating contexts?
2) Are there any correlations between EFL writer's negotiation of contexts and major variables affecting EFL writing?
3) How do EFL writers negotiate contexts under the influence of these major variables?

Guiding epistemology

This study is a synthetic and heuristic inquiry which intends to make a descriptive model of how EFL writers negotiate text and contexts in the dialogic perspective. In this section, the researcher attempts to situate this study among a variety of second language research, using the four parameters provided by Seliger & Shohamy (1989) and the conditions required of the proposed study.

The first parameter is concerned with how we approach research questions: synthetic or analytic. An approach to phenomena allowing us to view the separate parts as a coherent whole is labeled as 'synthetic' or 'holistic' approach, as opposed to an 'analytic' approach which tries to identify and investigate one or some factors of one major system. This study takes the former stance, in that it attempts to describe what dialogic negotiation in EFL writing is, through combining what will be made clear concerning textual
features with what will be elucidated in terms of contextual resources and of critical variables concerning L2 writing, and then synthesizing these findings to make a descriptive model as to the phenomenon of dialogic negotiation of text and contexts in EFL writing as a whole.

The second parameter relates to the overall objective or purpose of the research: heuristic (inductive) or deductive. When the aim of the research is heuristic, the investigator observes and records some aspect or context of second language so that he can describe what happens or generate hypotheses about the phenomenon investigated. In this type of data-driven study, researchers collect data, usually with no preconceptions, together with the contextual information, then categorize and analyze the data to describe the phenomenon. Such research with a heuristic objective makes it possible for us to discover patterns, behaviors, explanations, and to form questions or hypotheses for further research. The present study can be categorized into this type of heuristic research rather than deductive, hypothesis-testing one, because it intends to describe patterns to be observed in EFL writer's negotiation of text and contexts, on the basis of the written text produced in situations with fewer constraints and the information about contextual resources which is to be obtained from writers' concurrent think-aloud protocols. These two parameters are applicable to the conceptual level of research, but the following two parameters are to the operational level.

The third parameter is concerned with the control and manipulation of the research context. Usually, synthetic research including the proposed study should be conducted in situations with little control, manipulation, or restriction on the research context, and
the interpretive ability of the researcher plays a crucial role because it is the researcher who decides what will be recorded or what will be discarded, and it is also the researcher who provides categories into which the collected data is put.

Finally, the fourth parameter, which manifests the concrete relationship between the conceptual and the operational level, concerns the explicitness or specificity of the data and the data collection procedures. This is because the approach, objective, and design of the research will be expressed in what data will be regarded as important and the manner in which those data will be collected and analyzed. The present study will utilize data to be collected in a situation where naturally occurring phenomena of dialogic negotiation in EFL writing are observable through a data collection procedure with low explicitness.

The research design and data analysis procedure for this study will be guided by the epistemology above, and thus, the major parts of the research design and data analysis will be determined almost automatically. In the section that follows, I will delineate the primary research design of the present study.

*Investigating techniques and data analysis*

**Process tracing**

The major tool to trace the thought processes of EFL writers’ composing is concurrent think-aloud method, supplemented by stimulated recall, follow-up interviews, and text analysis. Although the method has been criticized as involving problems, as pointed out by Smagorinski (1994), this is the only way of eliciting what is going
on in the human brain in an actual working environment, and such limitations could be decreased when cautiously employed with such additional sources of data as above.

Before the actual concurrent think-aloud session, a series of training sessions spending at least one hour for one participant are mandatory. In the training sessions, the participants will be asked to solve mathematical problems, read a passage thinking-aloud, describe what has happened on the day, and write one of their previous experiences, e. g., the scary experience, while concurrently thinking-aloud.

After these training sessions, the participants will be asked to write an expository (persuasive) composition and think aloud concurrently what will come to their minds in the process of composing. In this writing session, the participants will go through a situation where they compose while negotiating contextual resources using textual features. The reason for the selection of the persuasive mode is that discourse tends to be designed for strategic purposes when writers know in advance that they have to persuade others to new beliefs or courses of action. (Johnstone, 2002, p.210)

While each participant is concurrently thinking aloud, the entire session will be videotaped and tape-recorded for the purpose of transcribing what will be uttered in the session and for the later stimulated recall and of tracing the spot on the line where the participant is writing. The participants will also be provided with a condition which is similar to the one where they usually write for their homework assignments; that is, they can take as much time as they need and can use any dictionaries if they want. Also, they use
the word processing system, MS WORD, through which they have been trained to compose.

Immediately after each participant finishes writing his/her composition, the stimulated recall and the follow-up interview will be implemented individually so that the researcher can check some unclear elements in the think-aloud session. Furthermore, the composition written by each participant will be reviewed to see if there is any inconsistency between the protocol and the written product.

Each session will be conducted individually in the researcher’s office where the participants sometimes visit for their course matters. The researcher will be present all through the sessions. The above procedure will be repeated for the ten participants of the present study.

Participants

The intended participants will be ten sophomore students majoring law, economics, business, and international studies at a local university in Japan where the researcher is teaching. The participants will be solicited from one of the English classes which the researcher taught in the previous year, and the students had been placed in the highest class on the basis of their English proficiency. Their TOEIC scores are available and the mean score is about 500, indicating that they are categorized as intermediate learners.

The intended participants seem to represent typical college sophomores in Japan in terms of their English language proficiency and educational backgrounds including training in both Japanese
and English composition. The researcher taught the class for two semesters, using a textbook to enhance four skills in English. The emphasis of the textbook seems to be placed on oral/aural and reading skills rather than on writing skill. The students have not taken any composition class offered at the university, although the researcher provided them with basic knowledge on English writing including organization and cohesive device in the English class. It is obvious from the researcher's observation that the intended participants can handle the task of concurrent think-aloud, provided with sufficient training.

The participants will be solicited in the following manner: the researcher asks each student in the class individually, providing a letter for soliciting participants including the statement for ethical review and the certification of informed consent.\(^{(2)}\)

*Writing task*

The participants will be asked to write a persuasive essay about the following topic: 'Write a persuasive essay about the way you think is effective in learning English, supporting the opinion with your own experience.' There are a few reasons to provide them with this topic. That is, the topic is designed to be in consistence with the conceptual framework and the research questions of the current study.

First, this topic is highly probable in the genre where the participants usually write. In fact, some of the participants have been asked, on the similar topic, to contribute to one of the university bulletins designed to enhance their motivation to learn English,
although it was in Japanese. The best persuasive essay to be written for the proposed study might be contributed to the same bulletin in English this time. This genre seems quite authentic in the light of the definition of the genre by Swales (1990). As mentioned in the earlier section, it is critical for the current study to be conducted in authentic contexts including an appropriate genre, in order to activate writer's dialogic negotiation of contexts.

The second reason is that, as discusses briefly above, the persuasive mode is the appropriate one to observe writers' strategic ability in writing, e.g., how they deal with textual organization while negotiating contexts including audience readers. It seems much easier, in this mode, for the writers to assume their audience readers whom they convince of their views and to manipulate textual features for this purpose than in other modes.

Also, the persuasive mode has been investigated extensively in previous L2 studies focusing on Japanese learner's discoursal features including global organization pattern. (Hirose, 2001; Kamimura, 1996; Kobayashi, 1983, 1984; Kubota, 1992, 1998) These findings on the discoursal features in such studies are available in comparing and contrasting with those in the current study.

In addition, there is a solid evaluation criteria for the persuasive essay established by Sasaki & Hirose (1999), and it can be utilized in assessing the quality of the persuasive composition, which is another important variable to be investigated, together with other variables. These are the major reasons for the selection of the topic and mode.

The participants will be furnished with a prompt including specific descriptions of the intended audience and purpose of
writing in order to create 'context' for writing. (See Appendix 1 for the example used for the pilot study.) It must also include information which they can utilize in generating ideas, citing the contents, building grammatical sentences, and searching for effective expressions. It is expected that the use of this section of the prompt by the participants will help the participants to make use of one of the immediate contextual resources in the prompt. In other words, it could reveal how they can utilize intertextuality.

**Analysis procedure of think-aloud protocol and texts**

There are two major components in the data analysis: 1) analysis of concurrent think-aloud protocol, supplemented by follow-up interview, and stimulated recall, and 2) text analysis. The concurrent think-aloud protocol will be coded for a later analysis in accordance with the categories specified as contextual resources by Linell (1998) and with the types of shared genre knowledge by Jones (1996). Many of the contextual resources seem to overlap the genre knowledge, and it has not been determined yet at this stage which of the two works more effectively to detect writer's negotiation of contexts. This must be confirmed in further case studies. The data obtained from the follow-up interview and stimulated recall will be used as supplementary materials to check the unclear points in the protocol.

The segmentation of the protocol is another problem to be solved. The two major candidates for the segmentation are 'turn' defined by Linell as a 'continuous period when one speaker holds the floor' and 'idea unit' defined as 'something corresponding roughly to a
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clause and sometimes a proposition.' (p. 160)

According to Linell, Bakhtin seems to have used the two concepts interchangeably depending upon the purpose. He also says that Bakhtin probably had something like 'idea unit' in mind when he dealt with 'dialogical' monologues in Dostoevsky’s novels. Since the present study also attempts to explore a similar 'dialogical' monologue, it is more convincing to use the latter concept as the elementary constituent of dialogue. Linell argues that the boundaries between such units are 'decision points for speakers, who must make up their minds whether to relinquish the turn or to go on talking, and if so, on what topical aspect.' (p. 161), and that listeners use these boundaries as resolution and response points.

However, as described earlier, the dialogic negotiation in writing is a metaphor and the actual negotiation takes place in writer's inner thought. Such being the case, it is necessary to postulate a role played by a fictitious listener as if the writer were taking with this listener. Hence, the segmentation of the protocol is tentatively made in the following manner: a semantic cluster, which is segmented by a pause of three seconds or longer \(^{(3)}\) and can be regarded as part of dialogue to oneself or a fictitious interlocutor, is the basic unit of segmentation. Some adjustments, after testing a few protocols, must be made so that inconsistency in the segmentation will not emerge.

Furthermore, the aspects of textual features which are referred to by the writer in the protocol will also be coded, using the following categories: lexical features, grammatical features, cohesive device, topical features, and global text organization. These coded data will be used as descriptive data and for the later correlational
analyses.


Also, the quality of each composition will be assessed analytically, using the scale mentioned above.

Finally, both the think-aloud protocol and written text gained from each participant will be analyzed qualitatively in order to reveal problems including how each writer uses contextual resources, what textual features are used to achieve his/her communicative project, and how writers use their own text to situate it in new contexts. It is expected that the truly dynamic nature of dialogic negotiation will be depicted through this qualitative analysis. This qualitative analysis is the core of a series of analyses.

Correlation analyses between variables

Correlation analyses, using Pearson's correlation coefficient, will be conducted to see if there are any correlations between the EFL writers' negotiation of textual features, contextual resources and critical variables concerning L2 writing. The variables to be investigated in the correlation analyses include the followings items:
1) Textual features (global organization pattern, topical structure, cohesive device)

The three aspects of the text features of the participants’ persuasive essays will be assessed in terms of the following points:

a) Global organization pattern

The 'organization' score in the composition evaluation criteria is used for this purpose.

b) Topical structure

Schneider and Connor (1991) used the proportion of sequential topics to parallel topics as an index of differentiating higher-rated essays and lower-rated ones. The same procedure will be employed in the proposed study.

c) Cohesive device

The number of occurrences of each type of cohesive device and cohesive ties will be counted. The relative frequency of an individual cohesive item, which can be determined by dividing the number of occurrences of a specific cohesive device by the number of T-units involved in one narrative composition, can be an index showing how frequently a writer uses the cohesive device. Average relative frequency scores for all cohesive items gained from the compositions can indicate learners' tendencies to use cohesive devices, particularly how frequently and what types of cohesive devices they tend to use in the persuasive compositions. Furthermore, cohesive density is to be measured by dividing the total number of cohesive ties by the total number of T-units in one composition.

2) Frequency of textual features referred to in negotiating contexts

The number of references made by each participant per unit(4) with
regard to lexical features, grammatical features, cohesive device, topical features, and global text organization, will be counted and used for this index.

3) Frequency of contextual resources referred to in negotiating contexts

Also, the number of references made by each participant per unit, in relation to the items categorized as contextual resources by Linell (1998), will be counted and utilized for this index.

4) Frequency of genre knowledge referred to in negotiating contexts

The number of references made by each participant per unit concerning the items categorized by Johns (1997) as genre knowledge will be counted and utilized for this index.

5) Quality of English composition represented by analytic evaluation scores

In order to measure the quality of persuasive compositions written by the EFL students, the following composition evaluation criteria designed by Sasaki and Hirose (1999) will be employed: 1) clarity of the theme (10 points); 2) appeal to the readers (10 points); 3) expression (10 points); 4) organization (10 points); 5) knowledge of language forms (10 points); and 6) social awareness (10 points). These criteria were created through careful and legitimate statistical analysis on the basis of a substantial amount of data obtained from Japanese high school teachers teaching composition, and thus, these seem quite feasible. The original evaluation criteria were designed for evaluating Japanese compositions written by Japanese students, but its English translation is also available. For the present study, the original Japanese version will be used for evaluating their English
compositions.

The raters of the English compositions will be native professors teaching English including writing at the university where the participants are studying, because the compositions will be written in the authentic foreign language environment where both the participants and the teachers have the shared speech community. The researcher will ask the raters to select one point out of the score range of 1 (poor) to 10 (very good) for each item of the evaluation criteria. Since there are six evaluation items in the criteria, the possible highest score will be 60 points.

6) Writers' English proficiency scores
All of the prospective candidates have taken the TOEIC test before, and the scores are available.

7) Scores of metaknowledge test
The metaknowledge test to assess the participant's metaknowledge on writing with 50 true-false type questions was made by the researcher, utilizing similar questions in Sasaki & Hirose (1996) and Kitao & Kitao (1991). This test will be employed for this purpose.

8) Scores of educational background
The questionnaire asking participants' educational backgrounds in writing Japanese and English composition was made by the researcher, on the basis of Sasaki & Hirose's (1996) questionnaire. The items asking about the contents which the participants have learned in school with respect to Japanese and English compositions will be used for this purpose. The number of items marked in this section on the questionnaire will be counted as an index showing what they learned in school.
Synthesis of data to build a descriptive model

This is the model building part where all the data obtained from the two types of analyses are synthesized to make connections in order to make a descriptive model of how the dialogic negotiation of text and contexts takes place for EFL writers. The aim of the synthesis is to explore how dialogic negotiation of text and contexts in EFL writing is related to the critical variables of L2 writing and to portray a clear image of the phenomenon as a whole.

Exploratory Case Study

The researcher conducted a pilot study in order to detect potential problems in implementing the actual full study. The following is the summary of the pilot study.

Participants

The participants, a male student and a female student, were two juniors whom the researcher taught in the previous year in the same English program of the same university. These participants were also placed in the highest class in accordance with their English proficiency, although their TOEIC or TOEFL scores are not available. The researcher’s impression is that they are roughly equal to the intended participants for the proposed study in terms of English proficiency. The researcher taught the female student for two years including English composition, but the male students had not taken any composition course. They were asked to volunteer for the pilot study.
Data elicitation

The data elicitation was done in the researcher's office individually, and the participants went through the following procedure: 1) the researcher's brief explanation of the purpose of the pilot study and of the procedure to be taken; 2) a training session of concurrent think-aloud, using simple mathematics problems; 3) asking them to write English composition addressing it to the campus discourse community, provided with the topic, 'Write an essay about the way you think is effective in learning English, supporting the opinion with your own experience'; 4) video-recording and tape-recording the writing session; 5) interviewing about the think-aloud session right after the writing session; 6) testing their metaknowledge about writing, using the metaknowledge test made by the researcher; 7) asking about their educational background in writing, using the questionnaire mentioned above; and 8) asking them to do the same writing task at home and interviewing the participants, on the following day, about their performance and what they thought the researcher could do to elicit the think-aloud data more effectively.

Recall protocol and composition by the male participant

The researcher traced the male student's writing process through his detailed protocol which the male student made on the basis of his memory. The think-aloud data obtained from the female student was impracticable because of her silence and whisper all through the session. The following is the brief summary of the focal points in the protocol.
Recall Protocol

In the transcript, there are several instances of the expected dialogic negotiation between the student asking questions about textual features and contents and the fictitious interlocutor, himself, answering such questions. Besides, there are a few examples of employing contextual resources, recalling his experiences in learning particular types of discourse, which is related to a contextual resource in a broader cultural environment, or commenting on his upcoming communicative projects, which is another contextual resource. Also, being asked what he remembered particularly about his composing process, he reported that, all through his writing process, he was always reviewing what he had written so far, revising the part or adding something new to the part. This shows his use of prior discourse, one of immediate contextual resources, in composing, and, at the same time, it could also indicate that there is a possibility of detecting the truly dynamic nature of dialogic negotiation, using text and contexts, when the actual think-aloud protocol, not the recall protocol, is gained from the participant. These facts obtained from the recall protocol suggest that it is quite feasible that actual evidence of dialogic negotiation of text and contexts can be detected if the data elicitation is carefully conducted in the concurrent think-aloud session.

Composition

The quality and amount of composition written by the student was acceptable for the text analysis designed for the present study. However, it should be noted that the composition was produced
without thinking aloud. The female student’s composition was also acceptable for the text analysis, although her think-aloud protocol was not available.

**Metaknowledge test and background questionnaire**

The metaknowledge test and the background questionnaire, which had been field-tested for my previous study, worked well for the two participants.

**Potential problems**

Some potential problems concerning the research procedure and the data elicitation technique will be discussed below.

Problems with the training session:

The amount of training for the concurrent think-aloud session was insufficient. The participants solved quickly the five mathematical problems provided for the training without thinking-aloud much despite the researcher’s persistent direction. It is desirable that the researcher provide the intended participants for the full study with a series of training sessions, for example, starting from problem-solving of mathematical questions, to thinking-aloud what they are reading, and thinking-aloud what they are writing about the things they have done on the day. Their own training at home is also necessary. Otherwise, it would be quite difficult to elicit analyzable think-aloud data from the undergraduate students experiencing the concurrent think-aloud session for the first time.

The male participant, who was able to think-aloud almost
nothing and could not write more than a single paragraph, told me that he could write better at home. In fact, he transcribed, although on the basis of his memory, things happened in his writing process in detail. The composition written at home was also acceptable in terms of amount and quality for the research purpose.

Also, the female participant confessed that she still had some difficulty verbalizing even in the second trial held at home although the second one was better. She said that her poor performance was simply because she was not familiar with the task, and that some amount of training could improve her verbalization skill.

In the light of these facts, it is expected that their performance in the think-aloud session will be improved, provided with sufficient training. Therefore, the amount of training will be increased, as mentioned in the procedure section; that is, a series of training sessions spending at least one hour for each participant which involve solving mathematical problems, reading a passage thinking-aloud, describing what has happened on the day, and writing one of their previous experiences, e. g., the scary experience, while concurrently thinking-aloud.

Problems with the think-aloud session:

The topic seemed appropriate for both students, considering the amount of composition. In the session held at the office, the male student was not able to write even a single paragraph for almost an hour, and he had great difficulty thinking-aloud, but his performance at home was much better. In consideration of his general ability in English displayed in class, it is obvious that the concurrent think-
aloud had a serious influence on his poor performance in composing and thinking-aloud. In the interview conducted after the session, both students told me that they felt like they were in a panic when they were asked to verbalize what they were thinking, which obviously caused their poor compositions and limited utterances.

Technical problems:

Technically speaking, there are a few points to be improved. First, a stickpin type sensitive microphone should be used to record the concurrent think-aloud. All they uttered was almost a whisper, and this caused great difficulty understanding on the part of the researcher. Second, the computer word-processing system should be utilized, as the participants usually do so, rather than writing on a sheet of paper with a pencil. The composition appearing on the computer screen is much clearer to video-record than that on a sheet of paper. Also, the function of tracing editorial steps involved in the word processing soft, MS WORD, which the researcher had not known at the time of the pilot study, could facilitate tracing their revising process. However, the application of the function needs to be field-tested before the actual implementation.

Notes
(1) Such issues as reactivity to the technique and over-training must be taken into careful consideration in these training sessions.
(2) Johnstone (2000) provides a clear guideline for such issues in Chapter 4.
(3) Such studies as Flower and Hayes (1981) and Cumming (1989) used this method of segmentation.
(4) The number of words or sentences produced by each participant in one
(5) I am grateful to Professor Sasaki for providing me with the original questionnaire and meta-knowledge test.

Works cited
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Appendix 1   PROMPT FOR THE PILOT STUDY

We have several bulletins for students at KIU. One of them is designed to enhance students’ motivation for English learning. Addressing all the faculty members, staffs, and students on campus, write a composition in English explaining the way to learn English which you think the most effective, with actual examples. Also, you are expected to explain why you think the method is. Please keep in mind that your English composition will be ready by the people in the campus community.