

Codeswitching as a Strategy in the Process of Second Language Writing A Preliminary Investigation Hara Yuko

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This is a preliminary study on the use of codeswitching between the L1 and L2 as a strategy in the process of second language writing by L2 learners. Think-aloud protocols were recorded as 5 Japanese university graduate and undergraduate students in an ESL program in the U.K. were writing compositions in English. The protocols were then examined for intra-segmental codeswitching and the switches categorized into three main types: sequenced constituents, embedded lexemes, and translations. Each of the types was further divided into subtypes according to language use. The compositions produced were then assessed for quality. This data was analyzed quantitatively to determine the relationship between the types of switches and the quality of the writing produced. The sequenced-constituent type of codeswitching was found to have a relatively close relationship to text quality, while the most frequently employed type of switch--embedded lexemes--showed no such relationship to text quality. Qualitative analysis based on retrospective interviews with the subjects was also conducted to explore the functions of codeswitching in the writing process. Each type of switch appeared to fulfill distinct functions in the L2 composition process. While further research is needed, the results appear to support other studies indicating that the L1 has a strategic place in the second language classroom.

<第二言語による作文過程におけるストラテジーとしての言語コードの切り換え>

この論文では、第二言語（外国語）として英語を使う学習者が英語で作文をする際にその作業過程においてどのように日英の言語コードの切り換えを行いそれをどのようにストラテジーとして活用しているかの予備的な考察を報告している。この考察のために、作文中の思考過程を被験者（英国留学中の日本人大学生3人、大学院生2人の計5人）に発話してもらい、プロトコルデータを採取した。各プロトコルを一定の基準によって分節化した後、その分節内でのコードの切り換え方によって分節を並列、組み込み、翻訳型の3つに分類し、さらに各分類中での日英の関係によって2つに下位分類した。この分類方法に基づいて、量的な分析と質的な分析を試みた。量的な分析においては、各タイプの頻度と作文評価の相関関係を回帰分析によって観察した。その結果、日英間の切り換えを並列的に行うタイプ、つまり、一つの内容を英語と日本語の構造を並列する形で発話しているタイプに関して有意な結果が得られた一方、最も頻繁に発現した英語の単語や語句が英語の構造から隔離された形で日本語の構造に組み込まれているタイプでは、有意な結果が得られなかった。こうしたタイプ間の効果の違いは各タイプの言語構造的な特徴とそれに伴う機能に起因すると推察される。質的な分析においては、各タイプの機能を被験者の回顧インタビューに基づいて考察、整理した。それにより、各タイプはそれぞれに特徴的な機能が意図されていることが明らかになった。

本研究は以上のような英語学習者の作文過程という認知活動における言語コードの切り換えについてのあくまで試行的、予備的な段階の考察に過ぎず、データの規模や収集方法、分析方法に関して、さらに改良が望まれる。

INTRODUCTION

This article reports on an attempt to examine codeswitching in the process of second language (L2) writing. The exploration is based on the assumption that L2 writers use codeswitching to their first language (L1) as a strategy in approaching the writing task.

Codeswitching as a social and communicative phenomenon occurring among those who have a command of two or more languages has been well-explored in the field of sociolinguistics since the 1950's. However, it is only relatively recently that its use in the L2 classroom setting or by individual learners of the L2 has attracted research attention. In the former sociolinguistic context, codeswitching has been analyzed in terms of its discourse functions as well as its linguistic or formal features. The two aspects and their combination have also been the focus in the latter context, i.e. that of strategic learner codeswitching.

Merritt, Cleghorn, Abagi and Bunyi (1992), for example, present a classification of switches which were observed in teacher-student conversations in the classroom setting. They classify the switches according to their instructional functions, such as those which are aimed to facilitate students' understanding and those seeking to redirect their attention. In addition to the functions of the codeswitching observed, the researchers' classification system identifies the formal manifestation of the switches, noting whether they occur at the sentence level or at the word or phrase level. The system also indicates whether switches involve translation or not.

From a similar perspective, Fotos (1995) examines codeswitching behaviors during task

performances by a group of limited proficiency Japanese learners of English (EFL learners) in comparison with those found in peer conversations by a group of balanced bilingual children. She surveys the syntactic features of the switches found in the two groups and then illustrates the discourse functions the switches serve. Among the functions of the codeswitching observed among the EFL learners, Fotos noted that "switching for emphasis" and "switching for clarification" apparently help the learners to carry out the given task. In a subsequent study, Fotos (1996) highlights this specific role of codeswitching, describing it as "a learning strategy to increase the salience of important input from the target language."

The present study intends to follow a similar line to the above pedagogically oriented studies, assuming that codeswitching may be a strategy for L2 learners. The target switches examined here occur in a different domain, however. Observation focused on codeswitching in self-talk or monologue in the form of think-aloud protocols, which are assumed to represent the thinking process during the writing task.

Interest in codeswitching during self-talk has been mentioned by Romaine (1995, p. 173) in sociolinguistic terms as follows: "Self-talk is hardly a recognized speech event, but it would be interesting to see whether bilinguals codeswitch in talking to themselves." On the other hand, Weissberg (1994), in a discussion of L1 writing, has referred to self-talk during writing as "monologue mode", acknowledging the significance of self-talk in producing "extended written text autonomously" (Weissberg 1994, p. 122). This view of self-talk was derived from the Vygotskian interpretation of "inner speech" in contrast to "external speech": "inner speech is speech for oneself; external speech is for others". While "the latter is the turning of thought into words", "with inner speech, the process is reversed: Speech turns into inward thought" (Vygotsky, 1962, p. 131). Considering that the essence of writing involves the process of generating and integrating thoughts, the role of "inner speech" or self-talk, as defined above by Vygotsky, should be paramount in the process of writing. The observation of self-talk, therefore, could be expected to reveal the essential features of the process of writing.

Thus, it could be said that the approach to codeswitching through the observation of self-talk in the writing process has emerged from the general codeswitching context as well as from the general writing research context. In sum, the present study intends to suggest how learners use the L1 as a resource for their L2 writing process by looking into the writers' self-talk recorded in the protocols. Before the presentation of the study, a brief overview of previous studies concerning L1 use in L2 writing will be given.

PAST RESEARCH ON L1 ROLE IN L2 WRITING

Cross-lingual influence of the L1 in L2 learning has increasingly drawn attention with the spread of such major theories as Contrastive Analysis (Lado, 1957) and Interlanguage (Selinker, 1972). In particular, Selinker's interlanguage concept recognized the cognitive or strategic aspect of language learning and "saw strategies of L2 learning and communication as two central processes" in the cognitive operation of the learner (Cook, 1993, p. 113). Among other studies of L2 learning strategies which followed Selinker's proposition, the survey by O'Malley et al. (1985) explored the strategies most comprehensively. In the list of the strategies they identified was L1 use "as a base for understanding and/or producing the second language" (O'Malley et al., 1985, adapted in O'Malley and Chamot 1990, p. 120).

The recognition of L1 use as a basic L2 learning strategy has been combined with interest in process approaches to L2 writing in the cognitivist's perspective. As Johns (1990, pp. 25 - 26) summarizes, the cognitivist, or "writing as problem-solving" view, has had considerable influence, first on L1 and then on L2 writing research and teaching. Consequently, the strategic use of the L1 in L2 writing as a problem-solving process has become increasingly acknowledged as a domain for exploration.

Following this line of interest, a body of empirical research on L1 use in the process of L2 writing has been conducted. The results have suggested that L1 use at some stages of the writing process could play a positive role, producing texts of better quality, and that L2 writers should be given more encouragement to make use of the L1 rather than being inhibited from using it in the course of L2 writing.

One example is a study conducted by Kobayashi and Rinnert (1992) investigating the effect of the L1 on L2 composition when the text is written in the L1 first and then translated into the L2, in contrast to compositions written directly in the L2. Their undertaking was motivated by earlier observations supporting the use of the L1 in the L2 writing process, such as those by Lay (1982), whose claim was that the L1 helps to create better quality text "in terms of ideas, organization and details" (Lay, 1982, p. 406); by Spack (1984), who found that the L1 was used to "meaningfully link image to word" (Spack, 1984, p. 664); and by Cumming (1989) and Zamel (1982), who both pointed out that the L1 functions as a resource to prevent interruption in the flow of thoughts. Kobayashi and Rinnert found that lower-proficiency students "produce higher quality compositions through translation", and "composing initially in

the first language allows students, especially those of lower language proficiency, easier and freer discovery of meaning", while higher-proficiency students benefit only in vocabulary and sentence structure variety, and not in the quality of content and organization (Kobayashi and Rinnert, 1992, p. 201). They conclude that "the use of the first language enables many students to explore ideas fully on their own intellectual and cognitive levels" (Kobayashi and Rinnert, 1992, p. 204).

Jones and Tetroe (1983) examined the planning process of L2 writing using think-aloud protocols. Their aim was to find out if L1 writing skill, the L2 writing process, and L2 proficiency are related, especially at the stage of planning within individual writers. In other words, they strove to discover if L1 planning skill transfers to L2 writing, and also if the degree of L1 use in the planning stage has any effect on the quality of planning, and eventually on the overall text quality. Their results show that planning skill transfers from L1 to L2 and that, though the text quality is affected by L2 proficiency and higher L2 level subjects use more L2 at the planning stage, it does not necessarily follow that planning quality in terms of abstractness decreases in proportion to the degree of L1 use. Thus, they reached the conclusion that L1 use in the planning process does not have a negative effect on the quality of planning. This could serve as counter-evidence against the long-sustained assumption among language teachers that L1 use is "incorrect, even harmful" while performing second-language tasks (Jones and Tetroe, 1983, p. 39).

Friedlander (1990) tested the hypothesis that the L1 might assist the retrieval of information. The results of this study indicated that the L1 did facilitate the retrieval of information in that the amount of information retrieved was proved to be significantly larger when the subjects were allowed to use the L1 in the writing process. Considering this effect of the L1, Friedlander proposes that "whereas beginning learners of English need to operate in their second language as much as possible to develop their acquisition of English," more advanced users of English should be encouraged to use their L1 advantageously as they "have developed their proficiency to such a level that their native language does not interfere with their writing in English" (Friedlander, 1990, pp. 111-112).

Jones and Tetroe (1983) also encourage L1 use, but they deal with the proficiency variable as follows.

When the writer who was most proficient in English moved to his highest level (of planning), he did so in Spanish (L1), suggesting that those who worked at a lower level could have also used Spanish if proficiency was what was inhibiting them. (p. 55)

Here, unlike in Friedlander, lower proficiency level students are also encouraged to use the L1 to overcome the cognitive constraints caused by L2 use. Lay, who was mentioned earlier, concludes her empirical study by stating that "when there were more native language switches, the essays in this study were better quality in terms of ideas, organization and details" (1982, p. 406). Thus, Lay, and Jones and Tetroe suggest that when writers are engaged in the process of composition, especially in higher-level or more abstract activities, such as planning, idea generation and text organization, switching to the L1 may be an advantage regardless of their L2 proficiency level.

Cumming, in the conclusion of his study on the relationship between writing expertise and L2 proficiency, claims that writing expertise is transferable between the L1 and the L2 on condition that a sufficient level of L2 proficiency is achieved to "sustain the self-regulated behavior that writing performance in a second language requires" (Cumming, 1989, p. 126). He asserts that one pedagogical goal to be achieved in trying to improve inexpert L2 writers' skill is to "help them learn to use problem-solving strategies to evaluate their writing effectively while they are composing" (Cumming, 1989, pp. 126-127). In order to be able to engage in these cognitive problem-solving activities as freely and effectively as possible, the L2 writers should be encouraged to feel free to use the L1 as "an important resource in their continual process of decision-making while writing" (Cumming, 1989, p. 128).

In summary, the functions of the L1 in L2 writing which have been identified in the studies mentioned above are as follows:

The L1 helps

- (1) to improve ideas, organization and details,
- (2) to link image to words meaningfully,
- (3) to prevent interruption in the flow of thoughts,
- (4) to discover meaning or to clarify thoughts,
- (5) to increase vocabulary and sentence structure variety,
- (6) to explore ideas fully at the writer's own intellectual and cognitive level,
- (7) to make use of L1 planning skills,
- (8) to retrieve information, and
- (9) to continue with the process of decision-making.

In conducting the present study, it was hypothesized that the switches between the L1 and the L2 found in the protocol data would be made to fulfill similar kinds of functions.

STUDY

Research Questions

Drawing on earlier studies which observed codeswitching behavior in L2 learners (see "Introduction") in addition to those which examined the role of the L1 in L2 writing pedagogy (discussed above in "Past Research on L1 Role in L2 Writing"), the present study was suggested by the following question: How might L2 learners use codeswitching as a cognitive strategy in the process of writing? In making a tentative approach to this question, an attempt has been made to construct a preliminary framework for the analysis of the functions of the switches and their effects on text quality.

It should be noted here that this is a very small-scale pilot study, and thus has limitations in its data size and time range. The sample size is only five and observation was conducted only once for each subject. Therefore, it is impossible at the present stage of exploration to suggest anything definite from the statistical and developmental point of view. The results provide only a tentative and partial picture of L2 learners' codeswitching behavior in the process of writing. It is hoped, however, that potential pedagogic implications and further research suggestions can be drawn from this preliminary enquiry.

Subjects

Five Japanese students participated in the study. At the time of the study they were in an intensive English course at a university in the U.K. in preparation for their respective academic subject courses the following term. All five students volunteered to participate in the experiment. Table 1 gives brief profiles of the subjects, including their English proficiencies, past experiences in learning and using English and attitudes to L1 writing. This information is provided only for general reference as to the background of the participants, and has not been specifically used as data for analysis in this study.

Data Collection

The participants were asked to record their composing-aloud protocol on an audio cassette while writing a composition in English. As the topic of their compositions, they were asked to choose one of three areas in which to compare Japanese and English ways of doing things: nature conservation, use of time, or attitude toward foreigners. Subjects A, C and D chose "attitude toward foreigners", subject B chose "nature conservation" and subject E chose "use of time". Detailed instructions about how to "think-aloud" while composing were given to them and are reproduced here as Appendix 1. The recording was done individually in the participants' own rooms without the author's attendance so that they could work without a sense of being observed. The length of the recorded tapes, as well as other quantitative data, are shown in Table 2.

The five protocols collected in this way were transcribed and coded by two coders (one of whom was the author) according to the segmentation and classification schemes presented below (in the "Research Focus" and "Categorization of Switches" sections, respectively). To assess inter-coder reliability, the percentage of the agreement of the coding results between the two coders was calculated. The observed agreement was 96.5%, which indicates that the coding can be considered reliable. Counts of the different types of switches noted in this coding process were used in analyzing the switches quantitatively.

In addition to the above figures, the five written works produced during the protocol-taking session were assessed and the resulting scores were used in the quantitative analysis. Assessments were made by two raters, both well-experienced EFL teachers. They were given a set of criteria based on that of a sample set of criteria for the writing section of IELTS (International English Language Test System) drafted by the University of Cambridge Local Examinations Syndicate (1990). Six aspects of the composition were assessed with scores ranging from a low of 1 to a high of 9. The totals of the six scores, the full mark of which was 54, were used as data for the analysis. The total scores of the individual subjects are shown in Table 2.

To assess inter-rater reliability, the sample coefficient of correlation between the two raters was calculated. The coefficient obtained was +0.63731. Coefficients fall in a range between -1 and +1, with results closer to +1 indicating more positive correlation between the variables. Considering the subjective nature of this kind of assessment-related data, the value obtained for the raters in this study can be considered to show that the two raters made reliable assessments according to a consistent set of criteria.

TABLE 1. Subject Profiles

Subject	Age/ Sex*	Major Score**	TOEFL	Previous L2 Education/ Experience	L1 Writing Experience/ Attitude
A	G/M	Politics	450-500	In ordinary Japanese school system, Reading at college, 3 weeks' stay in U.K.	Has experience in editing newsletter, Is "fond" of writing in general
B	U/F	Sociology	500-550	In ordinary Japanese school system, Reading, writing, speaking & listening at college, 3 weeks' stay in U.K.	Assesses self as "poor writer"
C	U/M	Politics	450-500	In ordinary Japanese school system, Reading, speaking & listening at college, 1 month's stay in U.K., Has experience as tour guide interpreter	Is "very fond" of writing in general
D	G/F	English (International studies***)	500-550	In ordinary Japanese school system, Reading, speaking & listening at college, 1 month' s stay in U.K.	Assesses self as "poor writer"
E	U/F	History	450-500	In ordinary Japanese school system, Reading and writing at college, 1 month's stay in U.S., 1 month's stay in U.K.	Essay writing at college, Assesses self as "poor writer"

Notes:

- * Age is approximated by indicating whether a person is an undergraduate (U) or graduate (G) student. To maintain confidentiality, specific ages are not shown.
- ** TOEFL scores were obtained in Japan shortly before the students entered the course in England. Scores are shown within a range of 50 to maintain confidentiality.
- *** Only subject D changed her major after entering the intensive course, switching from English, which was her undergraduate major in Japan, to International Studies. The other students kept the major they had in Japan.

Finally, to make a qualitative analysis of the functions of the switches, retrospective interviews were conducted with the participants. At this time, they were asked about their intentions in making the different switches in their protocols. In this way, the writers who actually employed the switches in their writing processes were used to identify the intended functions of the various types of switches.

Research Focus

Codeswitching is usually defined in sociolinguistic terms as follows: the deliberate switch of languages available to the speaker within the same speech exchange to suit the function of the utterance (Romaine, 1995; Collin, 1993; Beardsmore, 1986). The present study has adapted the above definition and applied its operation to the writing process.

In terms of the protocol data of the present study, "the same speech exchange" is considered to be equivalent to the same process of writing a composition, as represented by the think-aloud protocol. The most substantial difference between conversational discourse and the series of utterances made during the writing process is that while there is necessarily more than one speaker involved in conversation and the goal of the activity and any associated codeswitching is essentially to serve communicative purposes, the writing process comprises cognitive processes in which an individual writer is engaged in striving to complete a written product. Thus, any codeswitching which may occur in the latter process has distinctive features from those found in conversation. That is, codeswitching which happens in the process of writing can be assumed to be solely motivated by cognitive needs. It differs from its

communicative counterpart, which has been acknowledged to serve either conversational or situational functions (Gumperz, 1976).

In investigating codeswitching in the cognitive domain, this study limits its focus in the following way. Among the three types of switching defined by Poplack (1980) -- inter-sentential switching, intra-sentential switching, and tag-switching -- the present study particularly focuses on the type of switching which is equivalent to intra-sentential switching.⁽¹⁾ This type of switching is called intra-segmental switching here, as the protocols have been divided into segments by contents. The criterion of the segmentation is content-based; that is, when new content is introduced in the sequence of the utterances, that point is considered to be the borderline for segmentation.

The reason for the particular focus on this type of switching is that the aim of the present study is to identify the strategic functions of codeswitching in the process of L2 writing, where the writers are assumed to face blocks which arise from causes distinct from those presented when writing in their first language. The observation of intra-segmental switching is expected to reveal the struggles the L2 writers have to go through in their attempt to generate a single self-contained idea within a single segment. On the other hand, codeswitching across segments, which could be called inter-segmental switching, would be considerably affected by the change of the content implied by the segmentation criterion. Hence the focus on intra-segmental switching was thought to suit the aim of the study.

Past research supports this expectation. For example, Nishimura (1986) found that in the domain of spoken discourse, "switching takes place so often even within a sentence that not all switching can be attributed to contextual features" (p.123), but such intra-sentential switching can be largely inspired by "functional and communicative" requirements (p. 124).

Categorization of Switches

An attempt to categorize the intra-segmental switches in terms of their formal features has been made in reference to past studies that dealt with intra-sentential switches in the context of the communicative spoken discourse (Nishimura, 1986; Azuma, 1987; Myers-Scotton, 1992; Yoon, 1992; Merritt et al., 1992).⁽²⁾

Three kinds of formal features have been identified in the protocol. In addition, the respective types subsume two subtypes according to the relationship between the language codes. In the first type (Type 1), it is possible to identify constituents of English at one point and those of Japanese at another, each juxtaposed sequentially to complete one self-contained segment. In this type of switch, when a segment starts in English and then switches to Japanese, it is categorized as 1E, and when it starts in Japanese, it is labeled 1J. In cases where an interjection or a similar kind of discourse-marker equivalent starts the segment and the switch occurs immediately after that, the language of the expression is considered to be the starting code.

In the second type of codeswitch (Type 2), the overall structure of the segment can be identified either as English or as Japanese, but one lexical unit, consisting of a single word or of a chunk of words of the other language, is embedded in that structure. When the overall structure is English, the segment is labeled 2E, and in the opposite case, the label 2J is given to the segment.

In the third type (Type 3), it is possible to identify the juxtaposition of constituents of both languages as in Type 1, but the difference is that a constituent of one language is followed by its translation equivalent in the other language. Thus in this type of switch, the idea expressed in one language is reiterated in the other language.⁽³⁾ In such cases, when English comes first and the Japanese translation follows, the switch is labeled 3E; when translation occurs the other way around, it is labeled 3J.

When more than one type of switch occurs within a segment, the switches are classified as "plural switches" (abbreviated "Pl." in Table 2). This category was devised as a compromise to ensure that information would not be lost by putting all switches into mono-type categories, but at the same time, categorization would not become too complicated by trying to represent all the different combinations of types. Samples of the Plural Switches category are shown in Appendix 2.

Finally, cases where no switch occurs within a segment are indicated by the labels NE for non-switched English segments and NJ for non-switched Japanese segments.

RESULTS AND DISCUSSION

Quantitative Analysis

The results of the coding, indicating the number of each of the types of switches made by each of the subjects, as well as the subject's composition assessment score and tape time are presented in Table 2.

**TABLE 2: Quantitative Assessment Data
(Composition Assessment Scores, Use of Switch Types and Tape Lengths)**

Subject	Text Score	NE	NJ	1E	1J	2E	2J	3E	3J	PI.	Total	Tape Length (Minutes)
A	75.5	159	56	18	17	0	33	1	5	5	294	86
B	74.5	259	14	23	13	3	17	3	5	29	366	105
C	68	86	58	9	12	0	31	0	1	10	207	90
D	75.5	136	45	11	18	2	54	6	7	3	282	115
E	58.5	15	51	7	8	3	36	3	5	20	148	56

Note: See "Categorization of Switches" for details on switch types.

The table shows that for all subjects, Type 1, which includes subtypes 1E and 1J, and subtype 2J, represent a considerable number of the switches compared to other categories. This observation led to the hypothesis that Types 1 and 2J may have a substantial effect on the process of L2 writing, and thereby on the quality of the text. It was therefore decided that the ratio of Type 1 (1E and 1J) to the total number of switches and the ratio of subtype 2J to the total for each subject should be crossed with the subject's text assessment score to see if there was any relationship between the two variables of each pair.

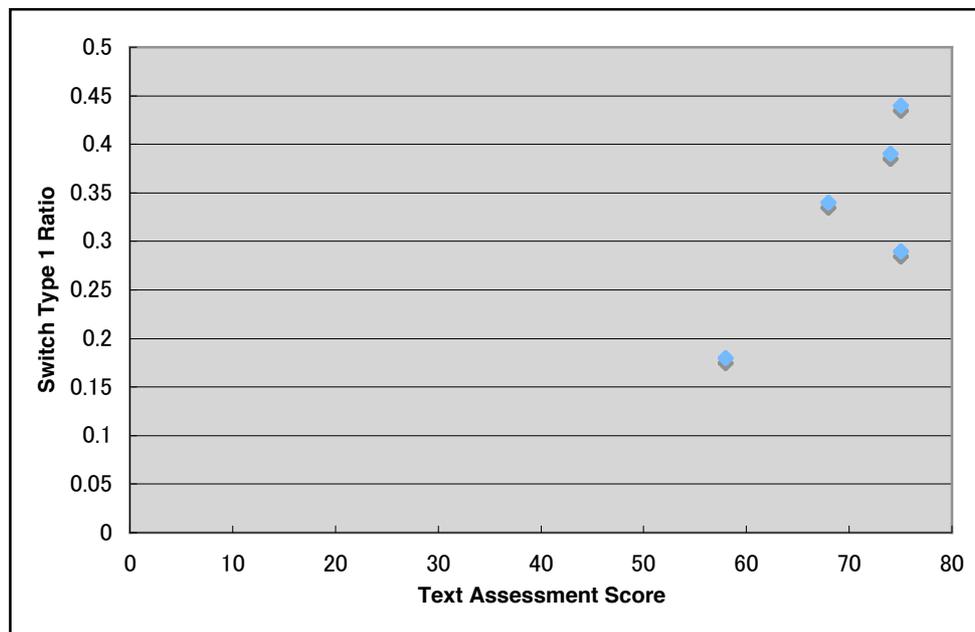


FIGURE 1: Switch Type 1 Ratio vs Text Assessment Score

The sample coefficient of correlation was calculated for the two pairs of variables: the ratio of Type 1 switches and text quality, and the 2J ratio and text quality. The coefficient obtained for the former pair was 0.7991, where the value ranges between -1 and 1. This value is considered to indicate that the ratio of Type 1 switches to the total number of intra-segmental switches could explain text quality: that is, the more frequently Type 1 switches occur, the better the quality the writer achieves. (See Figure 1.) On the other hand, when the 2J ratio and text quality were crossed, the coefficient obtained was -0.2614. This value indicates that the ratio of 2J switches to the total number of intra-segmental switches has no significant effect on text quality. (See Figure 2.)

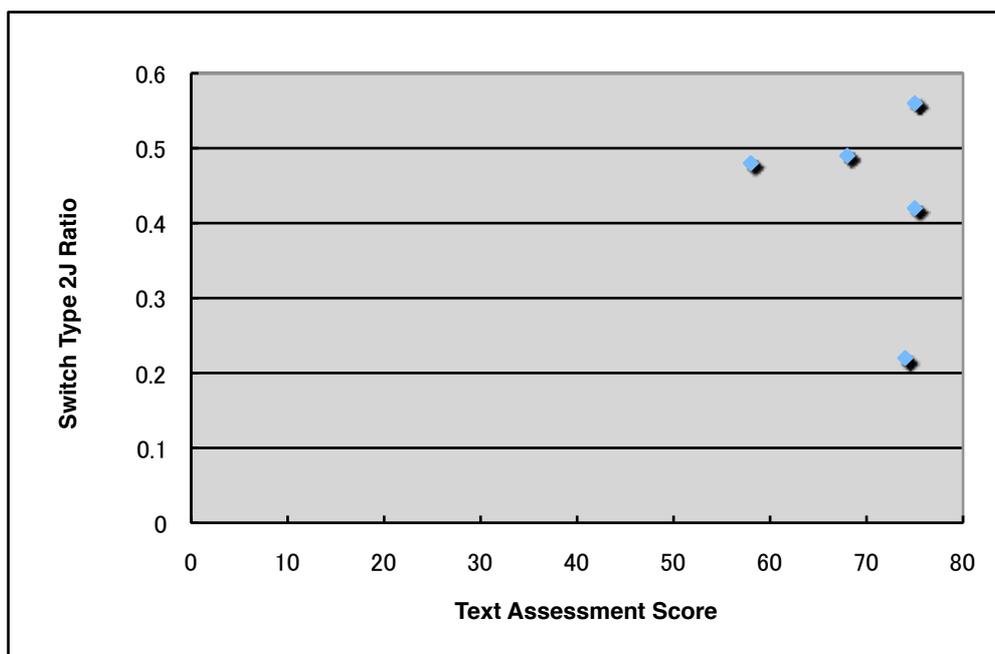


FIGURE 2: Switch Type 2J Ratio vs Text Assessment Score

A possible interpretation of the above statistical analysis is as follows:

Type 1 Switches and Text Quality: Type 1 switches, which consist of juxtapositions of L1 and L2 constituents, each with their own respective monolingual internal structure, can be seen to aid L2 learners in effective construction of the text both conceptually and linguistically. Idea generation would be promoted within the monolingual structure, either in the L1 or the L2, and the construction of meaning would be continued uninterrupted by the language alternation, while text production in the L2 would be aided by the preparatory or tentative representation of the idea in the form of the sequenced structures of the L1 and the L2.

2J Switches and Text Quality: Subtype 2J was the single category which occurred most frequently in all individual protocols except for that of subject B. In spite of the frequency of its occurrence, however, statistical analysis shows that this subtype is not directly connected with better quality text. The fact that 2J was extensively used by the subjects could indicate that 2J is the most accessible switching pattern for L2 writers in the idea generation process. However the results of the quantitative analysis allow us to say that 2J does not help text production of the L2 at its surfaced or product stage.

To sum up the quantitative analysis, it is tentatively concluded that, among the three types of switches observed in the protocols, Type 1 was the only one to have a significant effect on the production of better quality L2 text.

Qualitative Analysis

The functions of the codeswitches in the protocols were investigated by conducting retrospective interviews with the subjects. At this time, the subjects were asked their intentions in using various code switches. A summary of the functions of the different types of switches from the viewpoint of L1 use was made, based primarily on the subjects' reports of their perceptions. The summary is abbreviated in Table 3 for easy reference, and presented in more detail in the paragraphs below. For further reference, representative samples of the switches and the comments on them made by the subjects are given in Appendix 2.

TABLE 3: Functions of the Six Switch Types as Reported by the Subjects

Switch Type	Reported Functions
1E	<ul style="list-style-type: none">- Switches to the L1 were used to keep the flow of thoughts uninterrupted when writers were faced with problems related to content as well as language use.
1J	<p>The L1 was used as</p> <ul style="list-style-type: none">- a prompt to start generating text in the L2, typically when discourse interjections and conjunctions were used.- a facilitator for text production which would allow the writer to start with the more accessible code.
2E	<ul style="list-style-type: none">- L1 lexemes were used as temporary substitutes for their English equivalents when there were lexical gaps between the L1 and L2.
2J	<p>The L2 was used in L1 structures when</p> <ul style="list-style-type: none">- technical terms were mentioned.- preceding English expressions were referred to.- English set phrases were inserted in preparation for the production of English text at a later stage.
3E	<p>Translation into the L1 was used to</p> <ul style="list-style-type: none">- confirm the meaning of what had been written in the L2.- clarify the thoughts the writer had uttered in the L2.- elaborate or develop thoughts when further information was added to the translation of the English utterance.
3J	<p>L1 use before translation into L2 helped</p> <ul style="list-style-type: none">- as a rehearsal stage to generate English text.- at the word level, to facilitate the search for the most appropriate English equivalent in the subject's memory.- while the writer was thinking in the L1 about the content to follow, to check coherence between what had previously been written in English and what was to be written next in English.

Note: Features of the switch categories (See "Categorization of Switches" for details.)

1E: English structure followed by Japanese structure

1J: Japanese structure followed by English structure

2E: Japanese lexeme(s) embedded in English structure

2J: English lexeme(s) embedded in Japanese structure

3E: English utterances followed by their Japanese translation

3J: Japanese utterances followed by their English translation

Type 1, Subtype E

1E switches, in which segments start in English and switch to Japanese, were mainly used to keep the flow of thoughts uninterrupted when problems arose in relation to either English usage or content. For example, Japanese surfaced in utterances when grammatical items were referred to, as these terms had been learned in Japanese, and because such comments on grammar did not need to be included in the English text. Another example occurred when the idea was there but the writer's facility in English was insufficient to complete the exposition of the idea in that language. In this case, English gave way to Japanese so that the idea could be maintained temporarily until adequate English expressions were accessed through heuristic search. In other cases, affective comments surfaced in Japanese when writers were faced with mental blocks.

Type 1, Subtype J

In this type of switch, in which segments start in Japanese and then switch into English, the L1 functioned as a prompt to start the generation of an idea. Typical cases involved segments which started

with interjections such as 'eeto' (well) and 'uun' (aah), or conjunctions such as 'dakara' and 'sorede' or 'de' in its shortened form, both equivalent to 'therefore' or 'so'. These prompting words seem to be giving the writers time to meditate at the abstract, pre-verbalized cognitive level. In addition, this type of switch facilitated the writers' text production in English by allowing writers to begin with Japanese adverbial phrases or clauses, or Japanese subjects, and then continue with the following English part, as the starting position of these structural elements is common to the two languages. ⁽⁴⁾

Type 2, Subtype E

There were only a small number of switches of this kind, in which Japanese words or phrases are embedded in English structures. In fact, two of the subjects' protocols had no switches of this type. The motivation for using this kind of switch was that an English word had failed to come up during English text production, so a Japanese expression was temporarily substituted for it. The phrase "*nantoka*" (something or other), which was used several times in different protocols, seemed to be a convenient expression to fill in such lexical gaps.

Type 2, Subtype J

The embedding of English words in Japanese structures occurred frequently in the protocols of all of the subjects. The intended functions of such switches were reported to be as follows. Firstly, in the case of technical terms related to writing, such as "general statement" and "conclusion", or words related to other specific fields, such as "multi-ethnic society" and "National Trust", English terms were used without alteration in Japanese structures because there was no need to put them into Japanese in terms of the goal of the task, as long as their meanings were clear enough to the writers themselves. Secondly, when writers reflected in Japanese on what they had previously written in English, they referred back to the English expressions in question without translating them into Japanese. Thirdly, at the interim stage of creating an English sentence, English "chunks" or set phrases were often inserted in the preparatory Japanese structure. This stage was perceived by some of the subjects to facilitate the composition of English text.

Type 3, Subtype E

The juxtaposition of an English word or phrase and its Japanese equivalent was primarily used to confirm the meaning of things that had been written in English at an earlier stage. Another reported function of this kind of switch occurred when the writer made comments on his/her own writing in English; the subjects reported that translation of the comments into Japanese helped to clarify their thoughts.

The translated versions sometimes contained additional information not contained in the original utterances. Such cases were categorized as "plural" switches, because they are interpreted as consisting of both Type 1 and Type 3 switches. This kind of switching was seen to promote the elaboration of thoughts. A similar observation was reported by Fotos (1995, p. 10).

Type 3, Subtype J

Japanese utterances before the subject switched into English reportedly helped subjects to generate English text, since they served as a rehearsal stage in the easier language code for the learners. When this type of switch occurs at the word level, the Japanese utterance facilitates the search for the most appropriate English counterpart known to the subject. This function seems to be similar to what Friedlander (1990) referred to as "the retrieval of information".

It was also reported that Japanese helped to check the coherence of what had already been written and what was about to be written. This strategy may be thought to reduce the cognitive burden on the learners and help to spare part of their cognitive capacity for the consideration of logical aspects. Thus, the switch may be employed to reduce engagement in linguistic processing and allow writers to give consideration to the other aspects of writing.

CONCLUSION

The present paper has reported on an attempt to observe mental codeswitching behavior in EFL student writers. The study has attempted to classify codeswitching patterns into three major types: the sequenced constituent type (Type 1), the embedded single lexeme or single phrase (Type 2), and the translation type (Type 3). Each type is further classified into two subcategories in terms of the relationship between the two languages involved.

On the basis of this typology, the effects of codeswitching on the quality of the written text produced and its functions in the writing process have been observed. The results of the dual quantitative and qualitative analysis indicate the possibility that the different types may serve considerably distinctive functions (see Table 3 and affect the quality of the text to differing degrees.

The functions of each type of switch were reported to be as follows: 1E to keep the flow of thoughts, 1J as a prompt and facilitator for text generation, 2E to allow the temporary substitution of an L1 word or phrase to fill a lexical gap, 2J to refer to English terms and expressions, 3E to confirm, clarify and elaborate meaning, and 3J to rehearse text generation, to facilitate word search and check coherence. Quantitative analysis of the data indicated that among the three types of switches, the sequenced constituent type (Type 1) seemed to have a relatively close relationship to the quality of the text produced. Possible reasons for this would be that this type of switch might help to start and continue idea generation, whereas text production in English might be facilitated by the preparatory representation of the idea in the E-J or J-E sequenced structure. Thus it would be possible to suggest that the composing process might be helped both conceptually and rhetorically in an integrated way by this type of codeswitching.

In terms of pedagogy, the above findings could be of practical use in the instruction of L2 writing. Teachers could introduce the different types of switches and their possible strategic functions to students and suggest which type would be more helpful for the production of better writing. More generally speaking, evidence that the apparent tendency of writers to employ codeswitching is not necessarily a negative trait may allow teachers to have confidence in accepting this strategy in the classroom rather than imposing an inflexibly orthodox "English only" policy.

The present study, as a preliminary investigation of codeswitching, contains much room for improvement. It is expected, therefore, that further exploration of this area will improve the following shortcomings of the study and produce more generalizable and reliable results: (1) sample size: a larger number of subjects would improve the validity of the data; (2) time range of the observation: a longitudinal observation of the same subjects might produce interesting results concerning the way in which codeswitching behavior changes as L2 proficiency improves and how these changes are reflected in the quality of the written text produced; (3) think-aloud protocol as a data collecting method: the think-aloud protocol has not been free from criticism: the main criticisms have been that this method might distort the thought process and that it can only produce incomplete sets of data of the thought process, since subjects are not always conscious of their thinking process, and therefore the entire process cannot be verbalized (Hayes and Flower, 1983). Even though every possible effort has been made to overcome the drawbacks of the method in its execution by giving subjects instructions and by making arrangements to allow them to work under circumstances which are as minimally artificial and disruptive as possible, it is expected that there will still be ways to improve the employment of this method; (4) retrospective interviews: the retrospective interviews could have been better structured to facilitate comparative observation among the participants as well as among the different switching types; (5) the coding scheme: the scheme is only at a preliminary stage of development and needs further tests and improvements before it can be used with confidence. Thus, with these limitations in mind, the present study should be considered only a tentative, preliminary enquiry, but one, it is hoped, which will prompt further questions and more rigorous investigations into the role of codeswitching in second language writing.

NOTES

1. The present study only clearly distinguishes between inter-segmental and intra-segmental switching. Accordingly, tag-switching equivalents in the present data have been classified as intra-segmental switches.
2. The concepts of base language (Nishimura, 1986) and matrix language (Myers-Scotton, 1992) have not been used in the present study, as the main aim here is not to conduct linguistic analysis in a strict sense, but to observe functions according to a looser but more pragmatic or accessible classification of the formal aspects of the switches, which are not necessarily congruent with such precise linguistic typology. Merritt et al. (1992) used a similar kind of typology to explore the functions of switches in the classroom setting.
3. Fotos (1995) points out that translation from the L2 into the L1 may involve not only the repetition of the idea but also its further elaboration. Such cases have also been observed in the present study. They have been classified as plural switches, since translation and sequenced contents across the two linguistic codes are involved.
4. According to Nishimura (1986), those cases in which a subject marker such as "wa" or "ga" is attached to a Japanese subject that is followed by an English predicate are constituent-sequenced switches (Nishimura, 1986, p. 136), which would be included in Type 1 in the present typology. On the other hand, cases in which a Japanese adverbial phrase with an adverbial marker such as "de", "ni", or "kara" starts the utterance and is followed by an English clause, the sentence is categorized as a Japanese sentence with the English clause embedded (Nishimura, 1986, p. 133), which would be equivalent to Type 2 here. This is because word order in which an adverbial element comes first

in the sentence is considered to be derived from Japanese, and word order is the primary criterion by which the base language is determined in Nishimura's proposition. The present study, however, has included both kinds of cases--those in which a Japanese subject and those in which a Japanese adverbial element starts the utterance-- in Type 1, as the present typology is meant to limit the range of Type 2 to more apparently embedded cases as defined in "Categorization of Switches".

APPENDIX 1

Instructions for the participants in "thinking-aloud" protocol taking

Thank you for your cooperation with my research. The following are the instructions for the present experiment. Please read them carefully before you start to work.

On the cassette, you will find several minutes' recording of a model speaker. Please listen to it before you start your own recording so that you can grasp the general idea of what is expected to be recorded. Then rewind the tape to the beginning and start recording. When you finish, please submit the cassette in the recorder, the draft of your composition and, if you make notes during planning, the notes as well.

(1) Aim of this experiment:

To observe how Japanese writers compose in English.

(2) Topic of the composition:

Compare the attitudes or ways of thinking of people in Japan and in the U.K. on one of the following issues:

- a. environmental problems or nature conservation
- b. the use of time
- c. the way of treating foreigners

Please choose one of the above for the comparison and present your idea.

(3) Kind of writing expected:

Please write in an ordinary essay style, which is neither too casual nor too formal. There is no need to use references to build up or support your ideas. You are expected to write a short essay based on your own impressions or your past experiences.

(4) Length of the composition:

Between 300 and 500 words.

(5) Time:

Within 120 minutes.

Everything is to be included in this length of time, from planning to finishing-up.

**You might start thinking about the topic before you start recording. But please do not prepare too much beforehand, for example, by making a detailed written plan of the draft, or by writing down ideas on note paper. These kinds of activities are expected to be included in the recording period.

(6) Guidelines on "thinking-aloud" while writing:

** When you first turn the recorder on, please explain what you have done so far in preparation for the present writing.

- a. Please speak to yourself as you are engaged in the writing task and record your speech on the cassette. In other words, you are expected to talk about or "report" in "real-time" what is going on in your head while you are writing.
- b. Please try to keep saying whatever comes up in your mind as you write, except for utterances totally unrelated to the writing, like "I am hungry". For example, you might be thinking about what to write or how to organize the whole draft or which word or which grammatical structure to use. If you fall into silence, leave the tape on and try to recover your speech as quickly as possible. If you can, after the silence, please explain why you have been silent.
- c. You are expected to write just as you normally do in English writing. If you want to look at dictionaries, feel free to do so, and if you fall into silence while consulting them, please explain what you have done with them afterwards.

- d. If you need time for planning before you actually start writing a draft, please take the time for planning within the 120 minutes allotted. Even during the planning period, please remember to speak out so that your planning process is also recorded on the cassette. If you normally write down notes during planning, please do so and submit the notes in addition to the completed draft.
- e. If you spend time re-reading and revising or editing your draft, please include these activities within the given 120 minutes. Please remember to speak out even while you are doing these activities.
- f. Please do not be too conscious of the listener. Please try to pretend that you are speaking to yourself (except that you are expected to explain some things), as you probably do sometimes when you are alone or when you are trying to solve a problem or when you are trying to instruct yourself consciously about things that are still new to you.
- g. You can speak either in Japanese or in English. Please try to speak in whichever language comes into your head first.

APPENDIX 2

Sample Switches and Subjects' Comments on Their Functions

The following are extracts of the switches found in the "thinking aloud" protocols. They are intended to represent the way in which each of the three types of switches is considered to function. At least one sample is given for each of the six types in the protocols. In some cases, more than one sample is given for a type when it appears to have different functions. The writers' comments on their own intentions in using the particular types of switches accompany the samples.

The samples are presented in the following way. (1) Samples and comments are presented for each subject. In addition, a brief summary of the writer's tendency in codeswitching behavior is provided at the end of his or her set of samples. The summaries are also based on the writer's own reflections. (2) Japanese parts are italicized and then translated into English in the parentheses that follow. The parts in the parentheses that are literally translated are underlined. The other parts in the parentheses which are not underlined are added to make the translation intelligible. In the cases of interjections and other similar discourse or grammatical elements, brief explanations of their usage are provided in the parentheses in addition to or instead of the translation. (3) A question mark (?) is used when something is asked with a rising intonation, and dots (...) are used when pauses are quite recognizable.

PROTOCOL A

Type 1, Subtype E

(1) That English people avoid communicating *genzai bunshi de iindayo na* (present participle is all right, isn't it?)

(A's comment: As grammatical terms had been learned in Japanese, grammatical monitoring was naturally carried out in Japanese.)

(2) These two instances imply imply that *tsugi no koto wo shisa shiteiru youni omou* (seems to imply the following)

(A's comment: When relevant English expressions did not come to mind, Japanese equivalents were used to continue the sentence, and then from the switching spot, Japanese phrases followed in Japanese order naturally. As a result, part of the Japanese utterance was the repetition, not complement, of part of the English utterance.)

(3) It depends on ourself ourself whether... *aa* (sigh) *yappa nihongo dattara motto umaku kakerun dagana* (Ahh, of course I could write better in Japanese.)

(A's comment: Comments on feelings were basically and naturally made in Japanese.)

Type 1, Subtype J

* *Uun* (equivalent to 'aah' in English) many Japanese people *aah* who studies En... *a* (indicating sudden awareness) who studies English *dake ja naimon na* (not only "those who study English", is it?) who studies *a* who study who study in in in a university university.

(A's comment: The basic structure here was English, but when he noticed that part of his English text did not fully express what he wanted to say, he switched back to Japanese to think more precisely. Interjections were used without consciousness of whether they were English or Japanese.)

Type 2, Subtype E

No switches of this type were found in Protocol A.

Type 2, Subtype J

* They *wo tsukauto dore ga* English people *ka wakannakunacchau kara*

(If I use "they", it will become unclear which word refers back to "English people".)

(A's comment: The structure of the utterance was Japanese-based and English words were just used as loan words in order to think in Japanese about grammar and rhetoric.)

Type 3, Subtype E

* It is natural *touzen no koto da* (it is natural)

(A's comment: Japanese was used to confirm what had been said in English.)

Type 3, Subtype J

* For us *tokuni* (especially) for us especially *tokuni nihon-jin ni totte wa* (especially for Japanese people) especially for Japanese

(A's comment: To prevent the flow of the thoughts from being interrupted, Japanese words were uttered first and then they prompted English translations.)

Summary of Protocol A

Types 1 and 2J were the major kinds of switches used by A. This allowed him to use Japanese structure to integrate ideas. Even though he felt inhibited from using Japanese or thinking in Japanese in the process of writing because he believed that trying to think in English was a good strategy to improve his English proficiency, he found himself using Japanese structure quite naturally when he wanted to generate and clarify his ideas.

PROTOCOL B

Type 1, Subtype E

(1) There is ... there are large parks for example for instance Hyde Park. For example for instance... *uun* (interjection indicating meditation) not smooth *chotto gikochi nai kana... ma iiya* (a bit awkward... well doesn't matter)

(B's comment: Because she attempted to use English throughout the thinking process, her comments on her writing were made in English whenever possible. However sometimes Japanese comments replaced English ones in order for her to have a better or more precise grasp of the problem.)

(2) They are willing to go there and *uun uun* (indicating meditation) *kutsurogu* (relax) go there... they and... and they *nonbirisuru* (take it easy)

(B's comment: When English expressions did not come up in time in the process of constructing English structures, Japanese equivalents replaced them. This replacement allowed the subject to avoid interruptions in the flow and development of thoughts while she searched for appropriate English words.)

(3) Their duty is *isan wo nokosu koto* (to preserve heritages) *kireini* (undamaged)... not *kireini, sono mama nokosu koto* (to preserve undamaged, but as they are)

(B's comment: She wondered about the grammatical structure to use after "is": whether to use a clause starting with "that" or a phrase with "to" plus an infinitive, so she temporarily inserted the phrase in Japanese to fill in the space.)

Type 1, Subtype J

(in Plural Switch Type 1J+3E)

(1) *Uun* (indicating meditation) which is better to write write on? Just about English and after that I talk about Japanese? Or I write comparing? *hikaku shinagara susumeru noto docchiga iika...* (Which is better, to describe and compare at the same time, or to describe first and then proceed to compare?) Anyway at first I write down separately

(B's comment: Thinking about the organization of the text, she tried to use English initially, and then, in order to clarify the thought, she continued with the Japanese translation.)

Type 2, Subtype E

(in Plural Switch Type 3E+2E)

* It control rule *toukatsu suru* (control) ... no... it *nantoka* (something or other) many heritage... I can't count... this is countable noun... so it something many heritage heritages

(B's comment: "*nantoka*" was used as an equivalent to "something or other", which replaced "*nantoka*" in the following full English sentence. The subject felt as if "*nantoka*" and "something or other" were identical expressions and was not conscious of the difference of the languages. She used both as temporary fillers because the word in question did not come to mind instantly.)

Type 2, Subtype J

(in Plural Switch Type 3E+2J)

* On the other hand *sono ippou de* (on the other hand) however *kana* (Is "however" better?)... *nanka* however *bakkari dana...* *atode koko wa naosu toshite* (It seems that I always use "however"... I will change it later)

(B's comment: While thinking about better words to use, she naturally used Japanese structure, even though she was trying to use as much English as possible in her thinking.)

Type 3, Subtype E

(in Plural Switch Type 3E+1E)

* Because if we enter with dogs or cats maybe dog or cat run around *Hashiri mawattari shite yogoshitari suru shi* (run around and make a mess)

(B's comment: By translating into Japanese, she confirmed the meaning of what she wrote in English.)

Type 3, Subtype J

* *Kore ga igirisu-jin ga shizen wo daiji ni shiteru shizen ga totemo suki da tteiu riyuu no hitotsu* example *rei no hitotsu de aru to* (This is one reason or one example illustrating that British people value and like nature) This is one example that the English love and *uun* (indicating meditation) are interested in nature

(B's comment: In order not to stop the flow of thoughts after finishing an example, she first used Japanese and then translated it into English.)

Summary of Protocol B

Subject B attempted to use more English in her thinking, believing that thinking in English would help her to improve her English proficiency. On the other hand, whenever she felt blocked, she switched into Japanese to keep the thinking process going.

PROTOCOL C

Type 1, Subtype E

(in Plural Switch Type 1E+2J)

* If your guest is an Indian you won't serve... *Gochisou suru gochisou gochisou wa serve de iinkana...gochisou* treat *de iinoka* (Is "serve" all right for "gochisousuru"? Is "treat" all right for "gochisou"?)

(C's comment: Though he started in English, when he noticed problematic parts, he switched into Japanese structure to solve the problems.)

Type 1, Subtype J

* *Dakara neta ga tsukitara jibun no hou kara aite no kuni no neta toka wo kikeba iitte koto dayo ne* (so when we find no more topic to talk about during conversation, we had better ask for topics about the country of the person we speak with, hadn't we?) Secondly we had better learn the topic of their country

(C's comment: By using Japanese first, he checked the coherence of what he had already written with what he was planning to write.)

Type 2, Subtype E

No switches of this type were found in Protocol C.

Type 2, Subtype J

(in Plural Switch Type 2J+3E)

* The way of treating foreigners *kana ja* (I will choose "the way of treating foreigners", then.)
Gaikoku-jin no motenashikata tteiu imi de ii no kana un (It is all right to interpret this to mean "the way of entertaining foreigners", I think.)

(C's comment: By putting the title he chose into Japanese, he clarified its meaning to himself.)

Type 3, Subtype E

* In case of Japan *nihon no baai* (in the case of Japan)

(C's comment: He confirmed the meaning of the English expression by translating it into Japanese.)

Type 3, Subtype J

* *Igokochi ga warui no hou ga iikana* (Is "uncomfortable" better?) *igokochi ga warui* (uncomfortable) I was I was I was uncomfortable at that time

(C's comment: By thinking of the Japanese expression first, he was able to associate his idea with the English equivalent more easily.)

Summary of Protocol C

Subject C tended to start utterances in English, and then either inserted Japanese comments and translations or continued and elaborated in Japanese. He consciously used Japanese to think about the organization of the text; on the other hand, when English expressions occurred to him first, he prioritized them.

PROTOCOL D

Type 1, Subtype E

* More coldly? *Kore wa atode chotto shirabeyou bunpou teki ni* (I'll check this later in terms of grammar) more coldly? than English people

(D's comment: She deliberately used Japanese as the code for underlying thinking, so comments on the writing were made in Japanese while she was generating the English text.)

Type 1, Subtype J

(1) *De* (therefore) it's not strange that there are a lot of foreigners around English people themselves

(D's comment: Japanese conjunctions were easier than English equivalents to use as "springboards" to facilitate the generation of the following statement.)

(2) *Nihon-jin no ishiki no naka de gaikoku-jin wo monosugoku ishiki shiteiru tame ni* (Because in their consciousness Japanese people are greatly aware of foreigners) Japanese people try to do his best but... but *sono ishiki no naka ni* (in that consciousness) Japanese people has inferiority complex.

(D's comment: As adverbial phrases or clauses tend to come first in Japanese sentences, it is easier to start with the Japanese modifiers and then continue in English. In other words, text generation is prompted by the Japanese modifiers.)

(3) *Igirisu to nihon no hantai no koto wo kakuto* (To write about the contrast between Britain and Japan) *Igirisu ga* (Britain is) multi-ethnic and Japan is mono-ethnic country

(D's comment: After the particle "ga" indicating subject, she continued with the English term 'multi-ethnic' which she had learned in English, and with this term as a switching cue, she switched to English.)

Type 2, Subtype E

(in Plural Switch Type 2J+3J+2E)

* *Katakoto no* Japanese *de* (In broken Japanese) in *nantoka* (something or other) Japanese

(D's comment: To prevent interruption while translating the Japanese expression into English, she temporarily substituted a Japanese word.)

Type 2, Subtype J

(1) England *wa* (particle indicating topic) multi-ethnic society *de aru koto* (that England is a multi-ethnic society)

(D's comment: The terms "England" and "multi-ethnic society" had been learned in English, so they were used in the Japanese structure just like loan words. The same thing happened when she used technical terms related to writing, such as "conclusion" and "general statement", in considering the organization of the text.)

Type 3, Subtype E

* On the other hand it's still strange *mezurashii* (strange)

(D's comment: By translating the word into Japanese, she checked its meaning.)

Type 3, Subtype J

* *Eeto kore wa nani wo itai katte iuto igirisu-jin ga kanshin ga nai* (Well what this means is that British people are not interested) English people don't pay attention to foreigners but Japanese people pay attention to them

(D's comment: The use of Japanese helped to generate and structure her ideas before she put them into English.)

Type 3, Subtypes E and J

(in Plural Switch Type 3E+3J)

* However considering about Japanese manner of treating foreigners we the Japanese might do the same thing *Shikashi nagara nihon-jin no hou ga nihon-jin no hou mo onaji koto wo shiteiru kamo shirenai... shite... shiuru...* (However Japanese might also be doing the same thing... be doing... could do...) would... might... could...

(D's comment: She first confirmed the meaning of the English sentence by producing its Japanese translation. When she noticed an expression she could improve, she switched back into English to search for the most appropriate word.)

Summary of Protocol D

Subject D used Japanese structure most deliberately for generating and integrating ideas, as she was convinced of the advantage of the use of Japanese at these higher levels of cognitive activities in composition.

PROTOCOL E

Type 1, Subtype E

(in Plural Switch Type 1E+2J)

* The use of time between ... between *te kakuto yarinikui youna henna bunshou ni naru youna kigasuru* ("between" seems to make the sentence construction difficult and odd)

(E's comment: When she noticed word usage which she was unsure of, she switched into Japanese to think about it in Japanese.)

Type 1, Subtype J

* *De* (So) and they live *oya kara hanarete* (away from parents) separately from

(E's comment: By using the Japanese conjunction "de", she let herself think of the logical sequence after the prior part. Then the next inserted Japanese expression helped her to come up with the English equivalent which should follow "live".)

Type 2, Subtype E

(in Plural Switch Type 2E+3E)

* I think the use of time free time *no tsukaikata* (the use of free time) is very different between English students and Japanese

(E's comment: To confirm the meaning, she inserted the Japanese translation of "the use of" between the subject and the verb of the English sentence.)

Type 2, Subtype J

(1) *De nan dakke...* (so what was that?) *nantoka* (something or other) thesis specific thesis *dattakke* (was it called "specific thesis"?)

(E's comment: When she was trying to remember the English term, Japanese structure facilitated recollection.)

(2) *Ryou ni hairu ka* (live in dormitories or) share flats with other students *shiteiru* (are doing "sharing flats")

(E's comment: With the coordinating particle "ka" meaning "or" as a switching cue, she naturally switched into English. However, as indicated by the Japanese ending, the whole structure of the sentence remained Japanese.)

Type 3, Subtype E

(1) All my corridors do not work work *hataraitte nai ga...* (are not working, but...)

(E's comment: By putting the last part into Japanese, she tried to connect it with the ideas that followed.)

(2) It's due to the difference of university system *daigaku seido no chigai ni yoru mono dewa nai darou ka* (I wonder if it isn't due to the difference in the university systems)

(E's comment: This was the conclusion of the passage, so the confirmation of the meaning in Japanese was all the more necessary.)

Type 3, Subtype J

(in Plural Switch Type 2J+3J)

* *Futsuu no katei no hito ga futsuu ni daigaku ni ikuyou ni natta* England demo nihon demo (In both England and Japan where it has become common for people from ordinary families to go to universities) ... *futsuu futsuu futsuu* (ordinary) normal ? *chigau* (that is not right) general?

(E's comment: While uttering the Japanese word "futsuu", she was searching for an equivalent in English.)

Summary of Protocol E

Subject E most frequently used the 2J type switch. She also tended to combine different types of switches. She let herself talk or think in either language quite naturally without any special intention of using one of the languages more than the other. The result was that she mainly used Japanese structure to promote and facilitate the thinking process.

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