ABSTRACT
        A study investigated the reading and writing
strategies used by four students in a Japanese immersion program at
an Australian university. Data were gathered through classroom
observation, open-ended interviews, and think-aloud protocols.
Analysis revealed that the students had a limited repertoire of
strategies. Their reading and writing of kanji (Chinese characters)
was especially weak. They relied heavily on key words and inference
to get meaning from written text. Japanese phonetic scripts and
characters were read differently by the students, the former by sound
leading to meaning, and the latter by tapping directly into meaning.
For the writing of characters, repetition was the basic strategy
used. Implications are that students in script-based immersion
programs need to be taught specific strategies to deal with the new
script. Reliance on strategies carried over from their
phonetic-script background are ineffective. Appendices include:
description of Australian Second Language Proficiency Ratings
(ASLPR); Cloze test used for think aloud protocol; and transcription
conventions used. Contains 35 references. (Author/MSE)

Reading and writing strategies used in a Japanese immersion program

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Acknowledgments

Abstract

The study reported here investigated the reading and writing strategies used by students in a Japanese immersion program at a tertiary institution in Australia. Non-participant observation, open-ended interviews and think-aloud protocols were used to collect the data. Analysis of the data revealed that the students had a limited repertoire of strategies. Their reading and writing of kanji (Chinese characters) was especially weak. They relied heavily on key words and inference to get meaning from written text. Japanese phonetic scripts and characters are read differently by the students in this study -- the former by sound leading to meaning; the latter tap straight into meaning. For the writing of characters, repetition was the basic strategy used. Implications are that students in script-based immersion programs need to be taught specific strategies to deal with the new script. Reliance on strategies carried over from their phonetic-script background are ineffective.

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Michèle de Courcy and Gary Birch

Introduction

<u>General background</u>

In Australia, the learning of Asian languages is becoming increasingly important. The National Policy on Languages (Lo Bianco, 1987) as well as state level policy (Braddy, 1991; Ingram & John, 1990) have stressed the importance to our future of proficiency in Asian languages.

In line with government policy, the teaching of second languages is moving into the primary schools. The traditional emphasis on the teaching of second languages at secondary schools is being retained.

Language programs, especially in Japanese, are expanding rapidly. In 1983 there were 61,000 students studying Japanese in Australia. By 1988 this figure had grown to 121,000, an increase of 98%. In Queensland in 1988, there were 1,626 students learning Japanese in primary schools, and 11,025 in secondary schools (DEET, 1988). It is projected (Braddy, 1991) that these numbers will continue to increase.

Following recommendations that language programs should produce proficient users of language (Ingram & John, 1990), immersion programs, especially in the European languages, have been spreading in Queensland. While there is a desire to set up immersion programs for the teaching of the most popular

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language, Japanese, little is known about the second language learning processes involved in the study of a character-based language such as Japanese. In particular, no research has been found which investigates the process of reading and writing in Japanese immersion programs. It is necessary to understand more about the processes of learning Japanese in such programs, in order to inform teaching practice.

Specific background to the project

This project focuses on a Japanese immersion program introduced into Griffith University's Bachelor of Education course in semester two, 1993. The reason for introducing an immersion program is related to the need to prepare teachers of Languages Other Than English (LOTE) with a high level of proficiency in the language they will be teaching. The official language policy of the Queensland Department of Education states that

> very few learners of foreign languages such as Japanese and Chinese that
> use ideographic scripts can attain Level 3 in Reading and Writing.
> Consequently, it is recommended that for languages using ideographic
> scripts the minimum proficiency for teachers be set at S:3, L:3, W:2, R:2
> and for other languages S:3, L:3, W:3, R:3. (Ingram & John, 1990, p. 65)

These levels (described in Appendix A) are extremely ambitious and it is generally accepted within the language teaching community that they will rarely be achieved by students following conventional university programs. It was decided,

therefore, to introduce a more radical approach, viz, immersion. This type of program has achieved outstanding results in Canada since the first program was introduced in French more than 20 years ago.

Immersion programs in French, German and Indonesian have been introduced into a number of Queensland secondary schools over the last nine years. A pilot LOTE project which trialled an immersion course in French for teacher trainees was conducted at Mt. Gravatt campus in 1989 (Chappell & de Courcy, 1993). Students in the pilot achieved impressive gains in second language proficiency, while maintaining their standard in the language teaching methodology subject taught through the LOTE.

It was decided to choose Japanese for the LOTE strand of the Faculty of Education's BEd course for a number of reasons. Firstly, Japanese is the fastest growing LOTE in Queensland and there is likely, therefore, to be a continuing demand for teachers of Japanese. In addition, Garnaut (cited in Ingram & John, 1990, p. 40) suggests "that it takes two or three times the number of hours of study to achieve basic proficiency in Chinese, Japanese and Korean as in European languages". This would be far greater than the number of hours which can be provided in the Bachelor of Education course. It was decided that only a program which departed from the traditional language focus in favour of a content focus would achieve results approaching those required by the Department of Education.

Considerable research has been conducted on the second and first language

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proficiency and content area knowledge of immersion students (Genesee, 1983; Swain, 1985; Krashen, 1984). The majority of this research has focussed on European languages, mostly French. Very little has involved Asian languages, in particular those using a character-based script.

It is acknowledged (Ingram & John, 1990; Bourke, 1992) that character based languages present extreme difficulties for learners whose first language uses a romanised script. Ingram and John (1990, p. 40) state that "of the four skills ... writing is held to be the most difficult to acquire in all languages, but most difficult of all in Chinese, Japanese and Korean". Progress is often slow in the written mode and the reading of authentic materials is delayed to a large extent. Consequently, students can perform only elementary written tasks in the language for quite some time.

This poses an interesting problem for an immersion program in which students are confronted with a considerable volume of material, much of which is in the written mode. Students must use this material to gain mastery of the content of the subject and as a result activate their language acquisition process.

The aim of this study was to investigate the strategies used by Japanese immersion students in reading and writing Japanese. The study attempted to discover the problems students may be having with the written script and what they do to overcome these problems. In particular, the students' approach to reading and writing kanji (Chinese characters) was explored.

Literature Review

English-Japanese comparative studies

A number of studies conducted in the 1970s suggested that rather than presenting difficulties for the reading process, the Japanese writing system is facilitative (Martin, 1973; Gleitman & Rozin, 1977). These studies were based on research into reading difficulties experienced by Japanese and English speaking children. Results showed that Japanese children experienced a much smaller incidence of reading disabilities than their English speaking counterparts. Makita (1968) reported the figure for Japanese children with reading disabilities to be as low as 0.98%.

Later research, however, has indicated that these studies oversimplify the issue. On the one hand, they concentrate on the kana (hiragana and katakana). On the other, they fail to consider the cultural taboos of referring children with reading disabilities to specialists (Hirose & Hatta, 1988). A 1984 study by Morton and Sasanuma identified problems that learners experienced with the Japanese writing system and described the problem of learning kanji as acute. Stevenson (1986) in a comparative study of Japanese and English speaking children found a similar incidence of reading disabilities between the two groups. The Japanese children's problems increased as the percentage of kanji in the text increased.

Reading of Japanese by second language learners

Foster (1990) found that cultural background, and the attendant strategies

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which have been developed to process the written language affects the way in which the writing process develops when learners are faced with a language using a different script. This would suggest that the phonetic and cognitive strategies that English speakers use in processing written English lack the visual dimension necessary for processing a character based language.

Carr (cited by Watanabe, 1987) maintains that it is the task that the user is engaged in at the time which determines whether graphic, phonetic or sematic representations of kanji stored in the memory will be used. However, he does not provide details of how these representations relate to specific tasks.

Hatasa (1989) found in a study of English speaking students learning Japanese that pictographic characters were easier to learn and retain than non-pictographic ones. He also found that visual complexity was more closely related to difficulty in production than recognition. His study failed to show any significant effects of pre-training to sensitise students to the learning of kanji or of any different order of presentation.

Bourke (1992) conducted a pilot study with five Australian students learning Japanese at university. The students were in a regular, non-immersion language program. The study concentrated on only one aspect of literacy in Japanese -- the writing of kanji. The aims of the study were to find whether the students perceived the task of learning kanji as difficult, and what strategies they used to recall and reproduce kanji. Taped interviews, written tests, think-aloud

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tests and students diaries were used to collect the data. Recall strategies used included making up own stories, association with other kanji, visualisation, radicals and frequency of use. Learning strategies included writing out many times, reading, self-testing and grouping by radicals. The basic strategy was writing out. The students who did the best on the written test used the most strategies. Bourke concluded "that if students can be taught more learning strategies in the kanji learning task, ... more successful recall strategies will result" (1992, p. 38).

Reading and writing in immersion programs

All of the above studies focus on the issues of learning to read and write Japanese in courses which are language focussed. To date, no studies have considered the acquisition of written Japanese in courses where the focus is on content, i.e. where the language is a means to the end of learning specific content. Erben (1993) is conducting a study into the proficiency of students who have completed one year of Japanese immersion at the University of Central Queensland.

In immersion programs, students rely heavily on material written in the second language to gain knowledge of a content area. This material also serves the purpose of providing comprehensible input to aid the students' language acquisition. It is therefore usually modified rather than authentic text. The challenge in a late immersion program such as this one is to provide input which is linguistically simple enough for the students to understand but cognitively

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sophisticated enough for the age of the learners. Also, the texts must be presented in real Japanese, using kana and kanji, for as Fujimori (1993) states, romaji is not Japanese. The teaching of romaji is, according to her, an insult to Japanese culture.

In order for students in immersion programs to acquire language, text must provide "comprehensible input". In order for comprehensible input to contribute to acquisition it must include some language with which the students are familiar, and other new language. This is the "i + 1" referred to by Krashen (1985). It is in the struggle to understand the "+ 1" that students learn. By means of activities which require the students to interact with the written material, complex text is rendered accessible, used and recycled in numerous tasks which feed the acquisition process.

It is hypothesised (Swain, 1985, 1993; de Courcy, 1992, 1993) that "comprehensible output" or "o + 1") is another part of the language acquisition process in immersion programs. This process involves learners being pushed to move in their output a little beyond what they are currently capable of. Again, it is in the struggle to produce the "+ 1" that students acquire more language.

Some work has been done on exploring these processes in immersion programs in alphabetic languages (Krashen, 1985; Swain, 1985, 1993; de Courcy, 1992, 1993).

Methodology

This study aimed to investigate the strategies employed by students to

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comprehend and use written Japanese in a program designed to teach specific subject matter in Japanese.

Qualitative methods of data collection and analysis were employed. An outline of the project detailing what would be expected of participants was given to all the students in the class. This is found in Appendix B. Four female students volunteered to participate in the project. Fully informed consent was obtained from the volunteers before data collection commenced.

Study design

Data collection and analysis was conducted according to the following plan:

i.   July 1993 - August 1993. Observation of classroom activities;

ii.   August 25-30, 1993. Thirty minute interviews with individual students about their reading and writing strategies;

iii.   October 29, November 2, 1993. Second interview in more depth, involving concurrent and retrospective "think aloud" protocols.

iv.   November 1993. Data analysis.

v.   December 1993. Preparation of report.

Observation. Observation was coupled with interviewing because it provides direct knowledge of a situation (Becker & Geer, 1982, p. 239). Observation was the first stage of the research. This followed Corsaro's recommendation that the researcher engage in "prior ethnography" in order to "diminish obtrusiveness" and "allow for cultural accommodation and informational

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orientation" (Corsaro, 1980, quoted in Lincoln & Guba, 1985, p. 251).

The role taken by the researcher was generally that of a non-participant observer. Notes were not taken during observation as it was not used as a method of data collection, but as a means of orienting ourselves to the research setting.

Interviews. An advantage of using interviews is that the "respondent can move back and forth in time" (Lincoln & Guba, 1985, p. 273). However, informants can collate a number of different experiences into one, or alternatively "subjects remember what they have done in particular circumstances, and turn this information into a general procedure" (Wenden, 1986, p. 196). To overcome this potential difficulty, think aloud protocols were also used.

The first interviews were conducted in late August, 1993, after students had been in the program for six weeks. The interviews were unstructured and were conducted along the lines suggested by Spradley (1979).

Interviews were conducted by one of the researchers (de Courcy) with individual students in a small study room in the library. Before each interview commenced, the interviewer explained to the student how the interview would be conducted and what would be expected of her. Interviews were audio taped and later fully transcribed.

The transcripts were then returned to the participants for verification. The students were asked to read the transcripts and add or delete comments as appropriate.

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Think aloud protocols. Think aloud protocols "use as data, informants' own statements about the ways they organize and process information, as an alternative or supplement to inferring their thoughts from behavioural events" (Faerch & Kasper, 1987, p. 9). This introspection can be simultaneous with the event being examined, or involve immediately consecutive retrospection or delayed retrospection.

Referring to her work with ESL readers, Block stated that "thinking aloud differs from other forms of introspective report because readers report their thoughts and behaviors without theorizing about these behaviors" (1986, p. 464). A limitation of such protocols is that "processes which are already automatic or are not easily verbalized may not readily be studied" (Block, 1986, p. 464).

Therefore; it is recommended by experienced users of the technique that think aloud protocols be done with text processing tasks that contained "problems or impediments intended to bring normally covert processes into sufficiently deliberate use so that relevant kinds of self-report data may be obtained" (Scardamalia & Bereiter, 1986, p. 379). It was for this ability to bring normally covert processes into the open that the technique was chosen to be used in this study.

The particular think aloud strategy used in this study was that used by Kletzien (1991) in her work with high-school students. This technique involved the learners doing a cloze exercise and then immediately reflecting on sections of

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the task with the researcher. Cloze exercises were chosen because they "tap the reader's ability to make use of syntactic and semantic knowledge" (Kletzien, 1991, pp. 71-72).

Using think-aloud protocols gave the researchers a way to verify the accuracy of information and relate the information collected to themes which were emerging from the interview data.

The think aloud protocols were conducted during the second of the interview sessions, after the end of classes for semester two. Once again, the same researcher worked with the participants on a one to one basis. The students had just completed their first semester in Japanese immersion. The participants were asked to "think through" the process of completing a modified cloze exercise in Japanese. The cloze exercise, prepared for the study team by the students' teacher, is attached as Appendix C.

The students were asked to let their thoughts flow naturally, aloud, if they could, while working through the text (concurrent think-aloud). Some students were uncomfortable with thinking aloud while they were working. With these students, the researcher allowed them to work in silence for a short while, talk about how they had completed the section of the exercise just finished. On completion of the whole exercise, the students discussed with the researcher the strategies they had used to find the missing words or characters (immediately retrospective think aloud).

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When the cloze exercise and discussion of it was concluded, the interviewer asked the students to reflect on the semester as a whole. Topics discussed were their approach to reading and writing in the program, in particular, how certain tasks were approached. This "protocol" was tape recorded and later transcribed. Transcription conventions used are presented in Appendix D.

Data analysis. The researchers were guided in data analysis by the principles outlined in Lincoln and Guba (1985) and Miles and Huberman (1984).

The analysis of the concurrent think aloud protocols was conducted slightly differently from the analysis of the interviews. The categories used by Kletzien (1991) were used by one researcher to classify the data. This classification was passed to the other researcher for checking.

For analysis of the interviews, the following procedure was followed. After transcription and verification of the data an initial search for categories was made. This was initially done by both researchers separately. After meeting to confirm the validity of the categories the transcripts were then read and re-read many times. Changes to and refinement of categories were made as data collection and analysis proceeded. Memos as described by Miles and Huberman (1984) were written about the data in order to clarify final categories. The use of matrices to display the data helped at all stages.

The setting and the participants

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The setting. The immersion program which was the focus of this study began in July 1993. It consists of nine subjects in the Bachelor of Education course offered by the Faculty of Education, Griffith University and is designed to prepare teachers of Japanese for secondary schools. The subjects which comprise the Japanese strand cover aspects of Japanese society and culture, including education, literature and the cinema. In addition, students study the methodology of LOTE teaching.

To be eligible for the program, students are required to have satisfactorily completed Year 12 Japanese or have a level of proficiency in Japanese equivalent to that of a student who had completed Year 12. A total of 21 students were accepted for 1993.

The lecturer appointed to the program is a native speaker of Japanese with a good command of English. She has lived in Australia for many years and is married to an Australian. She will be referred to as "Sensei" in this report. As the program continues it is intended to appoint additional lecturers.

The participants. Four students volunteered to participate in the study -- Terri, Mary, Sharon and Joy. These are not the students' real names, but pseudonyms. The average age of the participants was 18 years. All had completed Year 12 in Queensland in the year prior commencing university. None of the participants was a native user of a character-based language.

Mary, Sharon and Joy had completed Year 12 studies in Japanese. Mary

and Sharon had attended the same high school and primary school. All were

native speakers of English. Terri, who was a native speaker of Vietnamese, had

not studied Japanese at all before she entered university. To prepare herself for

entry to the Japanese immersion course, she studied Japanese in another faculty of

the university during first semester 1993. She continued this study while she was

in the immersion program.

Before presenting the findings of the study, the types of reading and writing

expected of the students in the program will be outlined. A typical lesson in the

program will also be described.

Reading tasks. The only reading the students involved in the study have

done while studying in immersion involves the texts given to them by their teacher.

These texts are specially prepared for the course. The following extracts from the

interviews describes them.

August interviews

Sharon   well we have a topic every week, and we've got like a text that
            Sensei's done for us that we have to read and get information out of,
            so our lessons are based on that ... they're a mini text book or, like,
            just some fact information about the topic, whether it be karaoke or -
            salaryman, or stuff like that. It's just facts and there's graphs and
            that as well, and we just read.
Mary   ... they've got a lot of statistics in them - not too much though,
            that's all right, and they're not too overwhelming or anything

Along with the texts the students are presented with reading exercises. The

students describe them as follows:

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Terri   she gave out handout; you have to fill in the answer, and she gave us texts so whatever the question asked we just looks in the text and we learn from that.

Joy   Like you've got the text and then she'll have questions - um about the text and then you have to go and find the answers...

Writing tasks. During the semester, the students have had several 300 character written assignments to produce. The first was on the Brisbane transport system. The pattern for these assignments was that they would be introduced to concepts and sentence patterns through topics and texts about Japan. They would then have to produce a written assignment on a similar topic, but based on their knowledge of the local society and culture.

Typical Japanese Immersion Class. Japanese immersion classes are focused on a particular topic which forms part of an overarching theme. (for example, transport, marriage, leisure, within the theme of contemporary Japanese society.)

The teacher begins the class with a discussion of an aspect of the topic, accompanied with a range of materials to ensure that the meaning is clear. For example, in a lesson on employment, the teacher made use of a graph illustrating employment statistics, a passage with information about various forms of employment and an OHT with a range of employment-related data.

In introducing the topic, the teacher builds up a list of vocabulary using both kana and kanji. The meaning of new vocabulary is conveyed in a range of ways, including parapnrase, visual illustrations, extended explanations and

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demonstrations. Students are encouraged to ask for clarification of difficulties.

Students are then engaged in activities related to the topic which has just been discussed. These will usually involve short reading passages accompanied by questions which require students to interact with the text and use newly introduced language. In order to complete these tasks, students work cooperatively in groups of their own choosing. The development of answers to questions is collaborative. At this stage, student discussion is almost entirely in English. Difficulties which cannot be resolved by input from group members are overcome by consultations with the teacher who responds to questions in Japanese even if she is asked in English. Students also make use of dictionaries to clarify meaning.

As the semester progressed, students were beginning to make more use of Japanese both in group discussions and in questions asking for clarification directed to the teacher. Students' errors are rarely corrected directly, the teacher relying more on rephrasing of factually correct responses and encouraging students' attempts to communicate.

The overall impression one receives is of a relaxed and pleasant atmosphere within the classroom with students gravitating towards friends who are roughly at the same level of proficiency. Within these groupings, students seem to employ similar strategies to negotiate tasks. Those of lower proficiency rely heavily on translating into English, considerable use of dictionaries, and frequent requests (in English) for help from the teacher. Those who are the most proficient (two girls of

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Chinese background who can read Chinese characters) operate exclusively in Japanese and tend to cover their work much more quickly than the rest. The groups located towards the centre of this continuum, can be seen moving towards working exclusively in Japanese but with particularly difficult material, resort to English.

Often students do not complete all the activities in class and are required to finish outside of class times.

Reading strategies

Analysis of the think aloud protocols revealed the use of the several main strategies. The main ones, in order of frequency of use are: use of key vocabulary, use of prior knowledge, use of syntax and inferencing. These are summarised in Table 1 with one example of each strategy drawn from the think aloud protocol.

In the August and November interviews, the students also discussed their use of strategies in the reading comprehension exercises they do in class, and in more extended reading and writing. Results of these interviews are summarised in Table 2. The strategies revealed by analysis of the interview data will be discussed in detail. Strategies which were found in the think-aloud data will be discussed first, followed by discussion of other strategies which were discovered through the use of interviews. "Michele" in the interview transcripts refers to the interviewer.

Table 1
Analysis of cloze exercise think aloud protocol

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Using Kletzien's classification of strategies

Strategy	Criteria	Sample student responses
Looking for key vocabulary or phrases	The response involves reasoning around a particular word or phrase. Alternatively, the subject indicates inability to fill in the cloze blank because of a lack of understnading of particular words the subject views as crucial.	J: I don't know what that is from there on, so I don't know what they're doing. M: and without knowing the rest of the kanjis ... I wouldn't be able to do any more.
Making an inference or drawing conclusions	The response indicates that the subject had made a guess or inference based on his or her own knowledge AND information from the text.	J: that one would be hi ro en which is the wedding reception because that, is, the wedding, ceremony? and it's saying, that, I don't understand the full meaning o the sentence but, that's money, and it costs a lot of money, so obviously it would be related to the wedding, which is the wedding reception so
Using syntax or punctuation	The subject's response mentions aspects of grammar, parts of speech, or punctuation.	S: and then probably the wa after it has got to mean something, like maybe a person or something.

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Recognising the structure of the sentence	The subject's response shows that he or she recognised the author's organisation of the sentence under consideration.	M: um well, I didn't think it went in any of the others and I wouldn't- I wouldn't know for sure because I can't really, I don't know what sho tai sa re ru hito means or what this question means but um, it just seems to fit into that one, the- the sentence structure and where the gaps are
Re-reading previous text	The subject mentions specifically going back and reading something again, or indicates using information that was more than a sentence away from the cloze blank.	S: oh that means- oh that's the wedding reception this bit here and something, oh that's- that'd be that hi ro en here, changed my mind ... because yeah [rubs out] because that says like the wedding, the ceremony and the reception, the money from that, is a lot I think
Reading subsequent text	The subject indicates specifically reading ahead or mentions information which is located in a sentence after the sentence where the cloze blank appears	S: have a guess what that is, because I don't know the actual word there but when I read the rest of the sentence I'll probably figure it out?

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| Using prior knowledge | The subject indicates that he or she already knew something about or had already experienced something (sometimes phrased as a statement of fact that the subject assumed was common knowledge). | T: and with this one I know that in Japan, before the wedding the lady buys things. |

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Table 2
Analysis of interview data

Category	Criteria	Examples
Reading: "chunking"	student looks at groups of characters, not at individual ones	T: I pick up, like the first two word - then I say the last two word instead of looking- reading character by character.
Reading: inferencing	students will use the words they know to guess the meaning of the whole sentence	J: I pick out a few words' that I know, and then I think "oh, it must be about this and this"
Reading kanji: Tolerance of ambiguity	unfamiliar kanji are avoided at first	M: I skip all the kanji that I don't understand
Reading kanji: not same as kana (evident in November, not August)	students read kanji for meaning; kana are generally sounded out--> meaning	S: ... the hiragana means, words to me, as in WORDS, whereas the kanji has a MEANING - rather than a word,

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Reading, listening: Social strategies	students ask others in the group for help rather than ask the teacher	J: a lot of us sort of learn from each other, like we might say "oh, do you know what this one means?" and the person next to you might know what that means, and I might know what something else means, so we try and figure it out...
Reading kanji: reliance on phonetic script	students are unable to work out the meaning of an unfamiliar kanji without the furigana	S: I wouldn't be able to do it AT ALL if not for that ... T: ah, if it's- probably I don't know anything. Because it doesn't have the sound.
Writing: translation	students write what they want to write in English and then translate	J: I wrote down what I wanted to write in English, and then I sort of tried to put it in Japanese, but I had to change it a lot because you can never - go exact
Reading and writing: limited use of radicals	students do not know how to use radicals to access a dictionary or remember how to write a character	S: I can't see how that would work J: I'm sort of starting to relate - them into each other?

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Writing: recalling kanji	remember one part and guess the rest	M: generally if I can't remember a kanji- there's usually some part of it that I can remember and I just, kind of [laughs] make it up myself and then ask the others if it's right
Writing: learning kanji by repetition	the main strategy used is writing the character many times	S: when I'm learning to write it, I just usually write it over and over and over again, until in my head I can associate that kanji with that word, it's just almost subconscious that you can tell

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Use of key vocabulary for inferencing

This was by far the most common strategy employed by all students. They relied heavily on vocabulary which was referred to frequently in the teacher's introduction to a topic. This then becomes the "known" on the basis of which the "unknown" is inferred.

August interviews

Joy   I pick out a few words that I know, and then I think "oh, it must be about this and this" and then if there's a few verbs that I can understand then I might get the dictionary...

Mary   I read the text and if I can't understand - I skip all the kanji that I don't understand, and then go back and see if I can read it again, because usually I can pick up more if you read it again. And then I use my dictionary if there's any words that I can't remember

Sharon   you don't - read the sentence and work out every single word and exactly what it means, you sort of read the sentence, pick up a few words and then just say it, and sort of analyse and say "oh that MUST mean basically this", because the grammar of course is different.

Use of syntax for inferencing

This strategy involves the use of aspects of grammar, parts of speech or punctuation to work out the meaning of the sentence. The students mention their knowledge of particles as being particularly helpful for working out meaning.

August interview

Michele mm mm. and what CLUES are there in the sentence for you to be able to guess like that?
Sharon   the words that you KNOW, like the subject words and the particles, because if you know the particles you know, say, who they're

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talking about, what they're talking about, and the verb at the end, what they're doing or what's happening.

Michele   so how would you work out what the sentence meant, that had that new kanji in it?

Terri   ah, probably the verb, and the particle next to it and just guess

Use of structure

Most of the examples of this strategy were found in the think-aloud protocol. The students recognise the author's organisation of the sentence or paragraph under consideration. By understanding the organisation of the sentence, students are able to work out which word "fits". Some use of structure to find meaning was also mentioned in the August interviews:

Mary   well, usually she organises the sentences in the questions so that it's easy to find in the text, say, like, if you can't understand anything you just kind of- as a last resort you can look at the way she's written it and then look at the text, if you see what I mean, because she writes exactly the same but that's only like as a last resort, generally you can guess if you can't understand the sentence just by what you can understand.

"Chunking".

In extended reading most students also tend to read the kana or kanji in chunks, a group of characters at a time. If they are having trouble, then they read character by character.

August interview

Terri   ... when I pick up, like the first two word - then I say the last two word instead of looking- reading character by character ... I just looks at the first word and I assume the rest

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Michele	what about if you come across a character that you haven't seen before/
Terri	then I read word by word.

In August, Joy said that, rather than reading kana by kana or kanji by kanji, she looked

> usually at groups, so I can get the word - only individually if I'm having trouble - working out what the word is. But usually grouping; grouping the sentence - saying, because you have to- once you find out what a word means then you have to relate the other words to it to form the meaning, just so, it's usually, you know, "oh, that word's about that, and this must be related somehow, so what word would that be?"

In her November interview, Sharon illustrated an example of this:

> let's just find a word, hi ro en, I know that that means like the wedding sort of reception type of thing, like I don't, like have to sound it out because I don't have to read every single, hiragana, I can see it as one word

Mary, in August seemed to have a different approach:

Michele	do you say it aloud in your head or do you just sort of look at groups of words?
Mary	no, I say it, yeah, aloud in my head

By November she had ceased to say the kanji aloud when she was reading. She was either using "chunking" or tapping directly into the meaning of the character.

Reading kanji.

The students reported throughout the semester that the kanji posed the most difficulty for them in reading. Some, like Mary stated many times that they were "hopeless at kanji". What strategies are they using to cope with the difficulty caused by kanji?

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<u>Tolerance of ambiguity</u>. The main strategy used for dealing with kanji seems initially to be avoidance, or rather "putting on hold". This involves a fair tolerance of ambiguity, until meaning can be inferred later.

August interviews

Mary   I skip all the kanji that I don't understand ... my recognition of kanji
            is really bad so I kind of skip them, read what I do know and see if
            I can pick it out from the text...

Joy   I usually try and sort of get around it and think - you know "that has
            to be related to what these other words are", and sometimes you can
            work out the meaning without KNOWING that character. Like, you
            can work out that perhaps it means - someone's going to the shop.
            But you might not know WHO is going to the shop, but you know
            SOMEONE'S going to the shop. So, you at least know HALF
            what's going on

<u>Reliance on phonetic script for meaning</u>. In August the students had not yet developed a repertoire of strategies for finding out the meaning of an unfamiliar kanji. They were able to access the meaning of a kanji only by its phonetic representation provided by the teacher or by guessing from context. They were still locked in their phonetic script reading habits and treated an unfamiliar kanji like they would a new word in English. That is, they would either skip it and use inference or look it up by its sound. The only dictionary they were able to use was the type in which one looks up the character by its phonetic representation. If the furigana were not provided, they had no way of finding a character's meaning.

August interviews

Sharon   furigana ... I wouldn't be able to do it AT ALL if not for that ... the

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pronunciation is really like the SPELLING of it almost; it's the word

Mary   now she's started to write the hiragana next to the kanji which is heaps better because I think it's helped with my recognition a lot

Joy   ... some people use kanji dictionaries and things like that but I haven't got one of them [laughs] but not many people do because it's hard to use. By the time you look it up you probably could have asked someone anyway

Michele   What do you do if you're reading something on your own and you see a new kanji?

Terri   ah, if it's- probably I don't know anything. Because it doesn't have the sound.

The students also keep their own vocabulary lists, based on the set texts. They create these themselves. In these they continue their reliance on phonetic representations.

Mary   I write down all the words that we've learnt for that day and it's really good on the computer because you can, like, insert them in alphabetical order...in romaji (August)

<u>Tapping directly into meaning</u>. By November, the students' reading of kanji had undergone some subtle changes. They were still having a lot of trouble reading kanji, and tended to skip over unfamiliar ones. However, the think aloud protocol indicated that they now tended to read a kanji as a concept, rather than a sound. This observation was explored further in the interview. Rather than sounding out the character and going from its sound to its meaning, they will tap directly into the meaning of the character. Here are some comments about this aspect:

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Joy   I do have a lot of trouble - reading. I can read all the hiragana and
         everything fine, and - um even like, sometimes with the kanji even
         if I don't - know the sounding out in Japanese I'll know the
         meaning though?

Mary   I don't really think of the word for the kanji I just, go by their
         meaning which is why when I came to them I kind of, paused and
         didn't say anything because I don't really SAY the word?

Sharon   ... the hiragana means, words to me, as in WORDS, whereas the
         kanji has a MEANING - rather than a word, like I can often see the
         kanji, and I'll just know that means "marriage" rather than say "oh
         that means 'ke kon' which means 'marriage'"

Sharon   but when I see, say the kanji, I'll just see that I won't have to say in
         my mind "that's ke kon chiki, now what does that mean?" I'll just
         see it and think "oh yeah, I know what that means" and I'll think
         straight from kanji to English? rather than, say from kanji to
         hiragana to English?

Radicals. In August, the students showed little awareness of the fact that

kanji are made up of several smaller parts called radicals, which often provide a

clue for meaning. Even by November, they had a limited awareness of the use of

radicals as a strategy. Some students stated definitely that they did not think of the

characters as being made up of parts, but tried to remember them as a whole.

Sharon   I know that- we always get told that bits of them mean different
         things and if you put them together you can make it up but I never
         ever have done that before, you know like, I can't see how that
         would work, in my own head that doesn't "click" to me, so the only
         way I remember it is by repetition and memorising them usually it's
         just rote learning

Some students, however, showed a developing awareness of radicals. For

example, Terri recognises the character for "family" "because it's house and

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because I- I know it" (November). Joy was also developing an awareness of radicals:

> um - I'm sort of starting to relate - them into each other? um so that one, here, this - that one and that one are a bit similar only that one's got a bit like that and that one's got a bit like that.

Social strategies

The students rely on each other for help in working out the meaning of a text.

August interviews

Joy   I usually ask my (friends) "do you understand it?" and then um there's usually someone who doesn't so we both get frustrated together [laughs] and then we either get the dictionary out or something or work it out for ourselves or something...

... a lot of us sort of learn from each other, like we might say "oh, do you know what this one means?" and the person next to you might know what that means, and I ...ight know what something else means, so we try and figure it out; or ask Sensei. um yeah and then you sort of just um blend it together until you can understand it [laugh]

Sharon   So it's good because other people can help you and you don't have to go running to Sensei every time you don't understand something because there's usually other people in the group and it's a lot more fun to sit there and try and figure it out as a group and say "well this means this, and this means that, so I guess this would be the answer"

The pattern in all the students' responses to questions about the reading process is as follows: first you try by yourself, you read the parts you can understand, then infer the parts you can't. If you still don't understand, you look

up the pronunciation in the dictionary. If that is not successful you ask your
friends. Only then as a last resort, if they can't help you, do you ask the teacher.
This reliance on friends continued all through the semester.

Writing strategies

<u>Translation</u>

The strategy used consistently throughout the semester was translation.
Students would get their ideas together in English, and then translate into Japanese.

August interviews

Joy   um well I sort of- I looked at the text that we had and I sort of tried to get
some ideas from that, and then I sort of went into - - I just started writing
it, and then I went back through some old books from when I was at high
school just to get my sentence structure correct, um - and I sort of just
thought about what I- I wrote down what I wanted to write in English, and
then I sort of tried to put it in Japanese, but I had to change it a lot because
you can never - go exact

November interviews

Sharon   sometimes I'll look through my book, and find out the key words
that I probably should use in it, you know, give me some ideas ...
and then I'll- I write it in English first but I'm trying to get out of
the habit but I find it a lot easier to organise it if it's in English if I
write in Japanese I'll get lost and I'll, read back over what I've done
and it won't make sense and I won't know what I wrote? So I write
in English first? then just translate it to Japanese? - like, you can't
do it directly but as best I can and I usually have to change it
around a bit, and then I'll go and type it on the computer

Terri   um at first sometime I write it in English, sentence and I translate it
into, Japanese, and some word I don't know I just look up in the
dictionary, and then just guess the grammar?

<u>Writing in kanji</u>

Students' writing of kanji, like their reading of kanji, was in a rudimentary stage of development. They tended to write their assignments using the Japanese phonetic scripts.

August interviews

Joy   I basically just used the kanji that we'd learnt - I'm only going to- I didn't use anything else, um - because I didn't know if I was putting it in the right context sort of thing, so, yeah, just the ones that we'd learnt, um the ones that she uses

Mary   I'm not very good at my kanji so I've only got a few of them, not very many, yes, it's mostly in hiragana and katakana.

Strategies for remembering and learning more kanji were also rudimentary. Students basically relied on one strategy -- that of repetition.

November interviews

Sharon   I start to recognise it, but to write- to be able to write it I have to actually sit down with a bit of paper and write it over and over again and then cover it up and try and write it again, and just keep doing it like that until I learn and then go back later and see if I remember them

Mary   well, um from high school, I used to write the kanjis over and over repetitively, but I HATE that, I can't stand it, but it did kind of, that's how I've learnt to learn kanjis? so far, just going over and over them

Learning kanji

Learning the kanji seems to be the major problem for the students' developing literacy in Japanese. There also seems to be a difference in what they perceive they need to do to learn to READ kanji and to WRITE kanji. What

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strategies are they using to try to learn more kanji?

Techniques for writing kanji

Some students rely on writing the characters freehand over and over again:

Sharon   to be able to write it I have to actually sit down with a bit of paper
          and write it over and over again and then cover it up and try and
          write it again, and just keep doing like that until I learn and then go
          back later and see if I can remember them.

Terri   well writing, I learn it by practising a lot. The first time I learnt
          hiragana I did write all the time. I write whenever time I have free,
          and I write and I read, pronounce it, and then I write and pronounce
          it and later on I just pick a word and I pronounce it, if it's right, if I
          don't remember I check on it and I did that a few times, I remember
          the strokes and the pronunciation and whatever. I just practice it a
          lot

Other students used the computer to provide repetition, especially for reinforcement

of correct stroke order. When asked what she used to learn more characters, Joy

replied:

Joy   um, oh, JIEJING, basically, um, and if we don't know a stroke order ... I'll
       ask Sensei and she'll put it on the board for us - um, so unless you practice
       them it's very hard to remember them ... because you can easily forget what
       order the strokes went in if you don't practice it and so - or if you don't
       use it often

The most advanced student of the group taking part in the study used a

combination of repetition and imagery to learn to write kanji.

Sharon   when I'm learning to write it, I just usually write it over and over
          and over again, until in my head I can associate that kanji with that
          word, it's just almost subconscious that you can tell, and sometimes
          they look a little bit like what they're supposed to, like water and
          mountains and stuff like that...

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4 7

One student found that in the immersion program she could learn her kanji in context:

Mary um - well last year, I used to do it, go home and write it over and over and over again, but so far this year, since we've been doing the Japanese program, I haven't gone home and done things like that. I've just- because she gets us to a lot of writing and just from the practice that we have in writing and from her writing it up on the board, it helps a lot, I don't have to go home and do that sort of thing.

Mary also described the use of "approximation" or "invented spelling" as part of her interlanguage. It may be that this student, through immersion in the written language, is going through stages of successive approximation to the accepted written form of familiar kanji.

Mary generally if I can't remember a kanji- there's usually some part of it that I can remember and I just, kind of [laughs] make it up myself and then ask the others if it's right

Michele uh huh. Is there a particular part of it that you usually remember?

Mary just like the main part of it; the biggest part because I usually forget, like the little dots and strokes and things at the end, but just the main body of it, I kind of remember.

Techniques for reading kanji

Joy sometimes relates that kanji to a kana she knows:

Joy I might think "this one looks like a bit of a" you know, I don't know, sometimes I relate it to hiragana like I might say "that one- that bit looks like a katakana, that looks like a mu in katakana" or something, so. (November)

Mary also reports using reading as a strategy for leaning more kanji:

Mary I read my texts over and over, the texts that Sensei gives us I go home and read through it and try and recognise it and things like that. (August)

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<u>Computer</u>

During the course, the students have had twenty-four hour access to a computer lab. The character language word processor, JIEJING is installed on the network in the lab. This program uses a system of stroke-order entry for characters, using ten basic stroke types. The user inputs the strokes of a character, in the correct order, and then selects one character to insert in the text from a set of characters which appear on the screen. One of the researchers gave the students introductory instruction on the computer. Students have been expected to produce all their written assignments using JIEJING. To what extent had the program assisted in the development of the students' written Japanese?

August interviews

Sharon	The strokes get me confused. The kanji's OK, I can do kanji, but it's the hiragana and the katakana that I'm still not sure of, because the strokes aren't REALLY like what they [laughing] turn out to be ... and I find it hard to use the, the functions, like to underline and stuff like that. I'm used to using a mouse and I find it so much easier to have it all in front of me and to just be able to pick it, [shows action] like that, that's one of the things that- and when it beeps, and it won't stop beeping...[the program beeps if one inputs a wrong stroke order]
Mary	I don't think I've given it the chance yet, because I haven't done much on it. I'm still trying to figure out what strokes to use when and everything.

By November, the students had become used to the conventions of JIEJING and their attitude had become more positive. Some students noted that they could write more kanji in their assignments because the characters were on the computer

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and therefore easier to write. Others noted that the computer program reinforced correct stroke order. Joy's comment sums up those of all the students:

Joy It's been really good, um - it's a lot neater than what I write, and I still- I still really like that and um - at first it was really frustrating I thought "oh this is awful" not fast enough and everything but I've started to get a lot faster now, and, an it's- you sort of start to take notice of the stroke order? like and even when you're writing things sometimes you just think "oh yeah, it's one of those, one of those" you know like, just from the strokes, because you've used them?

Discussion

The fact that students are participating in an immersion program helps to account for many of the strategies that they employ in reading and writing Japanese. Immersion programs tend to be meaning focused as opposed to form focused, and students perceive that it is content rather than language which is the objective of their course of study. For example, students in the present study are examined on their knowledge of contemporary Japanese society and their command of the Japanese language is a means to this end.

The students' approach to reading reveals strategies which clearly demonstrate the primacy of content. They focus on language only to the extent that it helps them extract necessary meaning and complete content related tasks. Inferencing is a major strategy and is based most often on the recognition of key vocabulary. The importance of key vocabulary, in itself, derives from the nature of immersion programs which focus on a specific field of discourse. The recognition of features of the structure of sentences combines with key vocabulary to aid

inferencing as does the student's prior knowledge derived from the teacher's expository phase in her lesson presentation.

In focusing on meaning, students reveal a tolerance of incidental ambiguity, i.e. ambiguity in what are perceived as features of discourse which are not essential to the comprehension of content or the completion of a task. One such feature relates to the pronunciation of kanji. Students report on the difficulty they have remembering the pronunciation of characters but maintain that this does not impede their use of key kanji in the comprehension of text which is a visual rather than a phonetic process.

The twin strategies of inferencing and tolerance of ambiguity are cited in "good language learner" studies as positive characteristics of good language learners (Rubin, 1975; Naiman, Fröhlich, Stern & Todesco, 1978). However, there is a sense in which these features, while contributing to reading fluency, may have a negative effect on accuracy unless they are counterbalanced by strategies which develop the learners' knowledge and awareness of language. While it is true that one can extract meaning from a character without being able to pronounce it, this sort of knowledge represents a restricted form of competence (see Richards, 1976) and should not remain a permanent condition. Similarly, the students' apparent lack of appreciation of the function of radicals in characters reduces their ability to deduce meaning of unfamiliar kanji.

It is in the area of writing that students appear to be most bereft of effective

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strategies. Most seem to resort to composing in English and translating into Japanese. When it comes to learning to write individual kanji, strategies seem to be restricted to constant rewriting. JIEJING has proved useful in facilitating the writing of seminar papers and other written assignments, but the study of its application in Chinese programs taught in this faculty seems to indicate that while it is useful in developing a student's recognition of characters, it needs to be supplemented by handwriting so that students are forced to write all strokes in correct order. While it would be intuitively satisfying to think that students will acquire characters in an immersion program by regular exposure and that they will eventually produce them through having to use them frequently in the process of engaging in meaningful tasks, it is probably the case that they would benefit from some direct teaching which focused on helpful writing strategies.

Another feature of this particular immersion program which has bearing on the development of students' proficiency is the number of hours at present devoted to the initial subject. **Contemporary Japanese Society** is an introductory subject in the LOTE strand of the Bachelor of Education course. As such, students are allocated only four hours per week which means that the quantity of input is limited as is the opportunity for students to develop learning strategies. They have come into the course after five years of language teaching which has been more language than content focused. It is normal therefore that they have developed learning strategies to cope with that type of course. As the semester progressed,

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slight but perceptible changes could be detected when the November interviews were compared with those conducted in August. The most interesting of these was the realisation that there is a need to develop skills in dictionary use to access the meaning of kanji. Together with this will come a greater awareness of the importance of radicals and strategies for linking pronunciation to characters.

Next semester, students will have eight hours per week exposure to the immersion program, since they are scheduled to study two new subjects. This should accelerate the development of a range of strategies as they are presented with an increasing number of opportunities to negotiate meaning.

While it is tempting to expect that students will discover facilitative strategies on their own, it may be advisable to include some direct instruction in strategy development in future subjects. This could perhaps form a language support component embedded in the program.

Conclusion

This study has raised a number of interesting issues concerning reading and writing strategies employed by students in a Japanese immersion program. For example, it seems that the nature of an immersion approach induces certain strategies which may not be so evident in language-focused courses and which may be ultimately beneficial to the development of fluent reading. On the other hand, it may be that there is a need to embed a degree of language focus into such a program in order to increase the range of strategies which might contribute to the

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development of the students' proficiency in reading and writing.

Because of the brevity of this study and the fact that students were exposed to only four hours of immersion per week, any conclusions must be regarded as tentative. There is a need in subsequent years to continue the investigation and pursue some of the promising directions which have been revealed here. To summarise, these directions are:

i.   the development of inferencing in its various forms within a Japanese immersion program;

ii.   a comparison between reading and writing strategies used in Japanese immersion programs and Japanese programs which are language focused;

iii.   the effect of direct teaching of reading and writing strategies within a Japanese immersion program.

iv.   the effect of the use of the word processor, JIEJING, on students' reading and writing processes in Japanese.

Appendix A

Description of ASLPR levels used in the report

Key headings from Australian Second Language Proficiency Ratings (ASLPR)
D. E. Ingram and Elaine Wylie (1979/1983)

<u>Level 3 Speaking</u>: Minimum Vocational Proficiency

Able to speak the language with sufficient structural accuracy and vocabulary to participate effectively in most formal and informal conversations on practical, social and vocational topics.

<u>Level 3 Listening</u>: Minimum Vocational Proficiency

Able to comprehend sufficiently readily to be able to participate in most formal and informal conversations with native speakers on social topics and on those vocational topics relevant to own interests and experiences.

<u>Level 3 Reading</u>: Minimum Vocational Proficiency

Able to read standard newspaper items addressed to the general reader, routine correspondence, reports and technical material in his or her special field, and other everyday materials (eg, best-selling novels and similar recreational literature).

<u>Level 3 Writing</u>: Minimum Vocational Proficiency

Able to write with sufficient accuracy in structures and spelling to meet all social needs and basic work needs.

<u>Level 2 Reading</u>: Minimum Social Proficiency

Able to read simple prose, in a form equivalent to typescript or printing, on subjects within a particular context.

<u>Level 2 Writing</u>: Minimum Social Proficiency

Able to satisfy routine social demands and limited work requirements.

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Appendix B
MEMO

TO: BEd Japanese immersion students

FROM: Gary Birch and Michèle de Courcy

DATE: July 27, 1993

RE: Being involved in a research project

Dear students

As you know, we have received funding for a research project involving students in your class. The aim of the research is to investigate the strategies used by Japanese immersion students in reading and writing Japanese.

In order to gather data for the study, we need five volunteers to act as informants.

During the first phase of the research we plan to attend some of your classes as observers. In order to maintain anonymity our observation notes (and tapes if used) would be kept from public view and names of teachers and students would be changed both in the transcripts and in the final report.

A thirty-minute (approx.) interview about their strategies would next be held with each of the five key informants. A later interview would involve the use of a "think aloud protocol" where you would perform a reading and writing task while thinking aloud onto a tape.

The five volunteers would also be asked to record their language learning experiences in a learner diary and allow the researchers access to this diary. As with the observation data, no record of your name is required and every effort will be made to preserve your anonymity.

If you were interested in being involved in the study, we would need to ask you to give us about an hour of your time for the two interview sessions, as well as your permission to access your diary entries.

In order to conduct the study, we need the fully informed consent of those involved. Therefore, could you please complete the attached form and return it to Michèle in person during your computer lab lesson with her.

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Thanking you

Sincerely

Gary Birch   Michèle de Courcy

To: Gary Birch and Michèle de Courcy

From: _____

I would be interested in acting as an informant for your research project.

      Yes []   No []

If you answered Yes, could you please also complete the following:

I give Gary Birch and Michèle de Courcy permission to:

      a)   use my words recorded during observations in reports of the study;
                Yes [] No []

      b)   interview me and use my words in reports of the study;
                Yes [] No []

      c)   read my language learning journal and refer to its contents in reports
            of the study.

                Yes [] No []

Signed: _____ Date: _____

THANK YOU FOR YOUR COOPERATION -- IT IS MUCH
APPRECIATED!

(note: learner diaries were not eventually used in the project)

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Appendix C

Cloze test used for the think-aloud protocols

☐ の中のことばを一つえらんで、適当な形にして _____ に書いて下さい。

(1) 結婚式や _____ のお金は、親が払うばあいが、多いです。

(2) ひろうえんに _____ は、家族、しんるい、ともだちのほかに、両親の _____ の人もいます。

(3) 新婦は、ひろうえんで何度も服を _____ 。

(4) 上司や、なこうどにおくるおくりもので、七月におくるのが _____ 、十二月におくるのが _____ といいます。

(5) サラリーマンの _____ は、年二回出ます。

(6) 日本では、ふつう　結婚するまえに、女の人が _____ や _____ 、それに _____ などを買います。

たんす	着がえます	ボーナス	おせいぼ	寝具
しょうたいされる人	お中元	仕事関係	台所用品	
ひろうえん				

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Appendix D

Transcription conventions used

[no

[she   said at same time, overlapping

/   no pause

our-   speaker stops suddenly

,   brief pause

-      longer pause

//   speaker interrupts

?   upward intonation

.   downward intonation

MUST   emphasis

[ ]   researcher's observation

( )   untranscribable

(call)   uncertain transcription

(4.0)   pause - approximate length in seconds

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