

# Longitudinal development of Japanese sentence structures: a case of oral production by six learners

Kaoru Yoshioka, Yoshiko Tamaru and Shizuko Kimura  
Japanese Language Program  
International University of Japan

## 1. Outline of the study

This paper reports a preliminary analysis of a two-year longitudinal study which observed the development of Japanese as a second language (henceforth JSL) being acquired by adults. The study was conducted as a part of the Pacific Rim Research Project funded by the Department of Psychology at the University of California, Santa Cruz, and planned and implemented by the above department and the Japanese Language Program at the International University of Japan. The JSL component involved a total of 62 learners and seven interviewers. In addition to the relatively large number of the subjects involved for the time span of this study, what makes this study unique is its focus on learners' oral, as opposed to written, proficiency.

## 2. Literature survey

There have not been very many data-based studies of JSL that analyzed spoken data with focus on acquisitional stages. Doi and Yoshioka (1987) and Yoshioka and Doi (1988), both cross-sectional studies of English L1 (first language) speakers, investigated the acquisition of particles as they appeared in elicited speech as well as free-speech data, and attempted to relate the acquisition of particles and the word order. Yoshioka (1991) contrasted particle comprehension as well as elicited and free-speech in a cross sectional study of English L1 speakers. Ishida (1991) studied five levels of French learners of Japanese to investigate a number of interlanguage factors<sup>1</sup> through cross-sectional spoken data sampling combined with some follow-up data collection. Nagatomo's (1990) study is notable in his focus on learning stages, even though his data set comes from written samples for his cross-sectional error-analysis<sup>2</sup>.

## 3. The study

### 3-1. Subjects

The subjects (henceforth Ss) were graduate students at the International University of Japan (henceforth IUJ) who were enrolled in the Japanese language courses at IUJ. For most of the 62 Ss, the level of Japanese upon entering IUJ was beginning, and their length of stay in the Japanese Language Program varied. In order to obtain the longest range picture of development within available Ss, this report focuses on the six students who completed the six-trimester Japanese language program from level one over the two years. The Ss were all male, aged between 23 to 28 upon their entry to IUJ, and their first languages were Bengali (n=4), Urdu (n=1) and English (n=1).

It may be useful here to provide some background information of the Japanese language program that the Ss were trained in. The objective of this program at IUJ is to train the students to acquire intermediate level fluency of

---

<sup>1</sup> Areas of investigation included: phonology, particles, *te*-form of verb, vocabulary and expressions, tense and aspect, and sentence structures.

<sup>2</sup> Areas of investigation included: sentence structures and number of *bunsetsu*, *te*-form of verb, and past tense of adjectives.

the four skills by the end of the two-year program. Many graduates actually start work<sup>3</sup> in Japanese companies upon graduation. Classes are 90 minutes long, and meet five days a week for nine weeks per trimester<sup>4</sup>. The textbook used for the first three and a half trimesters was *Nihongo Shoho*<sup>5</sup>, after which a collection of materials were used.

### 3-2. Method

Data were collected by one-on-one interviews with a subject and an interviewer, which took place once a trimester for two years, resulting in a total of six interviews (from Nov. 1989 to May 1991). The content of interviews consisted of two types of tasks: one that varied from interview to interview targeted specifically to certain grammatical structures covered in earlier level classes, and one that was kept constant throughout the six interviews (See Appendix A for grammatical points covered by classroom instruction prior to each interview, and Appendix B for the tasks included in each interview). This paper reports on the latter, which was a picture description task (see Appendix C for the picture cue) and elicited conversation with a researcher. The matching of the Ss and interviewers, who were the instructors of Japanese at IUJ and assistants, varied from interview to interview depending on the schedule and availability of persons involved. The interviews, which lasted from 40 to 45 minutes each time, were recorded and later transcribed verbatim for analysis.

The Ss were aware that they were being recorded, and that the result of the interviews had no bearing on the grading of the course they were enrolled in.

All the instructions for the tasks at the interviews were typed in English and were shown to the Ss. Since English is the medium of communication at IUJ and students are only allowed to take Japanese after they demonstrated certain level of English proficiency, it was safe to assume that the Ss had no trouble comprehending the instructions. Also the Ss were allowed to ask methodological questions if they had any.

For the picture description reported in this paper, Ss silently observed the target picture for 30 seconds and were given three minutes to describe it. In cases when they finished earlier than three minutes, some prompting was done by the interviewers. As for the elicited conversation, Ss responded to one or two orally asked questions while the interviewers largely maintained the listener's role. The questions are shown in Appendix B.

### 3-3. Materials

In order to give the Ss maximum opportunity to show their proficiency at each level of the data collection, and also to provide differing levels of control upon the target structures, various tasks (see Appendix B) were arranged for

<sup>3</sup> The varied requirements in different workplaces, in addition to the already heavy workloads on the students from other courses, resulted in different "readiness" of students at the end of the program. It is true however, that many of the graduates do enter environments where Japanese is actively used, thus their motivation is high.

<sup>4</sup> For the first two trimesters, there was additional class for *kanji*, the Chinese characters. Also for the fourth, fifth, and sixth trimester, classes met five times, four times, and three times a week, respectively. Generally there was 80 hours of classroom exposure per trimester for the first three trimesters (first year). For the second year, the exposure was about 70 hours for the fourth trimester, 55 hours for the fifth, and 40.5 hours for the sixth trimester.

<sup>5</sup> This book adopts a grammatical syllabus, and the grammatical points covered are presented in such an order that the new structure is introduced on the assumption that the previous lesson has been learned. The grammatical points covered prior to each interview are shown in Appendix A.

eliciting Ss' speech, with visual materials to correspond to the tasks. Some of the visual cues were taken from books, while many were made originally.

### 3-4. Analysis

The recorded interviews give the general impression that Ss' interlanguage developed over the two years. But what exactly constitutes such perceived "development", or improved fluency? A number of elements have been suggested to answer such question, and some researchers indicate that a number of elements contribute with varying weight depending on the stage of interlanguage development (Higgs and Clifford 1982). A few of such general contributors may contain elements such as:

- longer sentences,
- structurally more complex sentences,
- decreased number of grammatical errors,
- larger vocabulary,
- improved pronunciation,
- availability of finer control of language to fit different situations and functions,

to name a few. In this report we will focus on the first three quantitative factors above, that indicate the amount and complexity of production.

The largest unit of analysis for the present study was "utterance". In a survey of literature Crookes (1990:194) notes that 'the utterance has a strong claim for attention in structural discourse analysis, perhaps to the point of displacing other units as a default choice on grounds of reliability and validity.' He quotes Crookes and Rulon (1985:9) for the definition of utterance as 'a stream of speech with at least one of the following characteristics:

- (1) under one intonation contour<sup>6</sup>,
- (2) bounded by pauses, and
- (3) constituting a single semantic unit.' (187)

The second unit is the S-node<sup>7</sup>, which was adopted from the concept in transformational grammar. This unit represents the degrees of embedding of sentences, called here in simpler terms, "hierarchical" complexity of sentences.

The third unit was the T-unit<sup>8</sup>, defined as 'one main clause plus whatever subordinate clauses happen to be attached or embedded within it' (Hunt 1966:735 in Crookes 1990:184). The T-unit was originally designed to measure the complexity of L1 writing and later applied to measuring L2 spoken data. Application to analyzing Japanese was first done by Harrington (1983:52-53), who defines the Japanese T-unit,

'in terms of the classificatory framework developed by Martin (1975), and built around the nuclear sentence. A nuclear sentence can be as short as a single verb or adjectival stem plus affix. The three types are:

1. Verbal: verb + ru e.g. suwaru "sit"

<sup>6</sup> Strictly speaking, there may be slight difference in the intonational contour pattern between English and Japanese. In this study, this concept of being under a single contour was adopted to Japanese, and the judgments were made by the authors.

<sup>7</sup> This S-node as well as the following T-unit (used also in Shimura 1989) were rather problematic in their application to Japanese data. See Appendix D for examples.

<sup>8</sup> Crookes notes that '(q)uestions have been raised concerning the validity of the T-unit and measures based on it as an index of SL development. (1990, 195). However, in the absence of an alternative instrument which is as objective, accessible and instrument-free as the T-unit, it was selected as one of the instruments.

2. Adjectival: adjective stem + i e.g. ookii "big"
3. Nominal: noun + da e.g. "kuruma da" (emphasis original)

In Harrington's study a T-unit is defined as 'a nuclear sentence with its embedded or related adjuncts' (53). The unit of measure for the length variables ... was the word 'defined ... as tango.' and '(e)ach tango was counted as one "word".' (53) (emphasis original). This concept was used in the analysis of the present study. The number of the T-unit per utterance indicates how sentences were expanded "horizontally".

The combination of the above units and what they represent are shown below. The abbreviation after the names of each combination is the code used in the tables to follow. Number of error-free<sup>9</sup> units were considered at the same time for comparison. Also, number of words were counted.

1. Total number of S-nodes/total number of T-units. (allS/allT)  
=Hierarchical expansion of sentence structures.
2. Number of error-free S/number of error-free T-units. (efS/efT)  
=Hierarchical expansion of error-free sentences.
3. Total number of words /total number of T-units. (allW/allT)  
=Amount of speech per sentence structure.
4. Number of words in error-free T-units/number of error-free T-units. (efW/efT)  
=Amount of speech per error-free sentence structure.
5. Total number of T-units/ total number of utterance. (allT/allU)  
=Percentage of sentence structure per utterance.
6. Number of error-free T-units/ total number of utterance. (efT/allU)  
=Percentage of error-free sentence structure per utterance.
7. Total number of T-units/ number of utterances containing T-units. (allT/U with T)  
=Degree of "horizontal" expansion of sentence per utterance containing sentence structure.

Examples of S-node and T-unit counts are presented in Appendix D.

#### 4. Results

##### 4-1. Interviews 1 and 6 compared

The results of Interview 1 (henceforth I-1) and Interview 6 (henceforth I-6), which were conducted 18 months apart, are reported here.

Table 1 Results of Interviews 1 and 6 compared

|                  | Interview 1<br>(n=6) | Interview 6<br>(n=6) | t      | d.f.=10  |
|------------------|----------------------|----------------------|--------|----------|
| a) allS/allT     | 1.00                 | 1.51                 | 3.249  | *p<0.010 |
| b) efS/efT       | 1.00                 | 1.51                 | 2.813  | *p<0.020 |
| c) allW/allT     | 6.54                 | 10.65                | 3.587  | *p<0.005 |
| d) efW/efT       | 5.97                 | 10.03                | 2.911  | *p<0.020 |
| e) allT/allU     | 0.89                 | 0.89                 | 0.000  |          |
| f) efT/allU      | 0.45                 | 0.38                 | -0.716 | p<0.500  |
| g) allT/U with T | 1.01                 | 1.08                 | 1.541  | p<0.200  |

<sup>9</sup> Any obvious pronunciation error was not counted as "error". False starts were also not counted. The words within the false start were not counted toward the total number of words. When Ss had trouble choosing a word and several trials were made, the final choice of word was considered to be S's choice at that time, and error judgements were done on the finally chosen word, even if a correct word had been uttered and rejected by the subject.

Table 1 above shows the results (average of six Ss) from the two interviews and the results of t-test performed for the seven points of analysis. As can be seen, the top four categories showed significant difference between the results of the two interviews. Categories (a) and (b) that showed significant increase in I-6 indicate the "hierarchical" expansion of sentences. Categories (c) and (d), the number of words used per T-unit in all T-units and error-free T-units, also showed significant increase. The change in percentage of T-units per utterance over time, represented in category (e), was slightly unusual in that the average number between the two interviews were the same, thus t-test could not be performed. Category (g), indicating the "horizontal" expansion of sentences, did not show significant difference between the two interviews.

Note that in category (f), the *t* value shows a minus, meaning that the ratio of error-free T-units per utterance decreased from I-1 to I-6. In simpler words, the ratio of grammatically correct sentences decreased from I-1 to I-6. This is the only category that shows a decrease of value. This point will be analyzed more in detail in section 5-3.

It is worth noting that the Ss with same L1 background did not show any obvious pattern of development as a group. This might indicate that it is safe to assume that the data from Ss can be treated as of six individuals, rather than of three language groups.

#### 4-2. Comparison of I-6 results and native Japanese data

As mentioned above, there were some areas of investigation that showed significantly different results between the first and the last interviews. It may be safe to assume that these are some of the possibly multiple number of factors contributing to the perceived "development" of interlanguage. Now, if approximation to native fluency is the ultimate goal of the interlanguage, the "distance" to native data at the I-6 is of interest. Thus five native speakers (two males, three females in their late twenties to early forties) were asked to perform the same task as the Ss. The only difference for these native speakers (henceforth NSs), was that the instructions were given orally in Japanese. Table 2 below shows the results of the average values of both groups.

Comparing Tables 1 and 2 the following can be observed. Firstly, the number of words used per T-unit (categories c and d) showed significant improvement between I-1 and I-6, and even showed no significant difference between I-6 and NSs (categories 2 and 3). This is the area where Ss improved most. The other improved category, "hierarchical" expansion of sentences, showed significant difference between I-1 and I-6 (categories a and b), but still there was a significant difference from NS data (category 1). Horizontal expansion of sentences (category g) showed no improvement between I-1 and I-6. Thus it is not surprising to see a significant difference between I-6 and NS data (category 5).

Table 2. The results of Interview 6 and the native Japanese data compared

|                   | Native Japanese<br>(n=5) | Ss'<br>Interview 6<br>(n=6) | <i>t</i> | d.f.=9            |
|-------------------|--------------------------|-----------------------------|----------|-------------------|
| 1. allS/allT      | 2.42                     | 1.51                        | 3.104    | * <i>p</i> <0.020 |
| 2. allW/allT      | 13.91                    | 10.65                       | 1.981    | <i>p</i> <0.100   |
| 3. efW/efT        | 14.21                    | 10.03                       | 2.244    | <i>p</i> <0.100   |
| 4. efT/allU       | 1.21                     | 0.38                        | 7.5616   | * <i>p</i> <0.001 |
| 5. all-T/U with T | 1.37                     | 1.08                        | 2.726    | * <i>p</i> <0.025 |

To summarize, there are three points at issue here. The first is that contrary to expectation, the development of "horizontal" expansion of sentences did not accompany the "hierarchical" expansion. In fact, the data failed to show any "horizontal" expansion between I-1 and I-6. The second is that even though the amount of "hierarchical" expansion increases within the first two years of learning Japanese, it still does not reach the same level as native Japanese. The third is that in the area of amount of words, Ss reached the same level as the NSs by I-6.

## 5. Discussion

### 5-1. On the increase of the length of T-unit

The most outstanding difference between the data of I-1 and I-6 is the number of words used per T-unit (words per all T-unit changed from 6.5433 to 10.648, and words per error-free T-unit changed from 5.9683 to 10.025). Comparing the results of I-6 and those of NSs, we find no significant difference. That is, within the limitation of this context, we can say that the Ss improved to the level of NSs by I-6. One note of caution is that such a task may inherently limit the number of useable words in such a way that non-natives can easily approach natives in the amount of words they use.

This trend, the lengthening of each sentence in utterance as interlanguage progresses, is also documented in Ishida (1991) in her analysis of French learners of Japanese. Ishida points out, however, that an opposite trend is shown in Nagatomo (1990) in his analysis of writing. Harrington's (1986) results, obtained from cross-sectional data, also points in the same direction. He adds the weakness of the length measures as an index of oral JSL development and suggests they might be more profitably used in conjunction with other measures for more precise assessment of learner's proficiency (54).

### 5-2. On the expansion of sentence structure

As Ss' sentence becomes longer, more varied sentence structures and expressions naturally get incorporated into their speech. Both the "hierarchical" and "horizontal" expansion will be considered next.

5-2-1. Firstly, the "hierarchical" expansion showed significant increase from I-1 to I-6. At the point of I-6, however, Ss' data showed significant difference with native data indicating that the Ss had not reached native level in this category (figures for allS/allT is 1.51 for Ss and 2.42 for NSs).

5-2-2. Secondly, contrary to our initial expectation, the development of interlanguage sentence structure did not consist of "hierarchical" as well as "horizontal" expansion: the observed "hierarchical" expansion was not accompanied by "horizontal" expansion. Raw figures in Table 3 below show fluctuating number of occurrence for "horizontal" expansion from I-1 to I-6.

Table 3. "Horizontal" expansion of sentences for each subject (allT/U with T)

|   | I-1  | I-2  | I-3  | I-4  | I-5  | I-6  |
|---|------|------|------|------|------|------|
| A | 1    | 1    | 1.07 | 1.31 | 1.11 | 1.29 |
| B | 1    | 1    | 1    | 1    | 1.1  | 1    |
| C | 1    | 1    | 1    | 1.09 | 1.05 | 1    |
| D | 1    | 1    | 1    | 1    | 1    | 1    |
| E | 1    | 1.07 | 1    | 1.22 | 1.07 | 1.07 |
| F | 1.05 | 1    | 1.09 | 1    | 1    | 1.13 |

Ishida (1991) compares the appearance of "complex sentences" (called "hierarchical" expansion in this study) and "compound sentences" (called "horizontal" expansion in this study). She notes that error-free complex sentences appear more than error-free compound sentences only in "Level 1" (beginning level), and the reverse is seen past Level 1 stage. What is interesting is Ishida's report of total number of appearance (including usages with error) of the two structures. Compound sentences appear more in Level 1, followed by the period when complex sentences appear more. Complex sentences continue to be used more than compound sentences until at Level 5 (the end of the intermediate level in Japanese university language courses), where they are once again surpassed by compound sentences.

Ss' level at I-6 in the present study was still at the intermediate stage, that is, before Ishida's Level 5. Thus the results in the present stage, complex sentences being used more than the compound sentences, show the same tendency as Ishida's results.

5-2-3. There were a number of considerations raised for the cause of "horizontal" structures not expanding as much as expected. These are some of the points that seem worthy of investigation.

(a) *Task effect.*

Even though NSs showed a significant difference from the Ss in "horizontal" expansion, NSs' figures are not necessarily high (Ss: 1.08167 vs. NSs 1.366). This indicates that there is a chance of a task effect for this task that does not require the use of horizontally expanded sentences, which may come from the choice of the picture or from the nature of the description task. The test of whether or not there is a task effect can be done by analyzing data from other tasks such as elicited speech.

(b) *Characteristic of spoken data.*

The effect of horizontally expanding sentences is to clarify meanings such as cause and effect, and time sequence. In speech, however, such information is often expressed by using short independent sentences headed by linking words instead. If this is the case, speech data as in the present study may not provide much environment for horizontally expanded sentences. In addition, there may be some effect of Ss' input. The textbook Ss used contained primarily dialogues with relatively short sentences especially up to the I-4 level.

(c) *Hierarchical expansion and acquisition stages.*

Sentence modification, which is the most effective tool in Japanese to expand sentences hierarchically, was introduced to Ss soon after I-1. Ss repeatedly practiced sentence modification in class, which was considered as one of the key structural points. However, it is not until I-4 that we start to see this structure in Ss speech (except one S who used it in I-3). Once appeared, tokens of sentence modifiers seem to increase rapidly, rather than slowly. What does this time lag between instruction and actual use indicate? Does the sudden use mean that this structure is related to acquisitional stages in Pienemann and Johnston (1987)? In order to answer these questions, there are a number of things that need to be considered, such as the difficulty of acquiring sentence modification and corresponding structures in Ss' L1. Follow-up interviews after I-6 may also provide some insight.

(d) *Language specific characteristics.*

A comparison of Japanese sentence modification and English relative clause revealed an interesting fact. They are often considered parallel to each other largely because of their semantic domain. In terms of the use however, there seem to be a difference. Japanese sentence modification is required even in the environments where English tend to use other structures, such as: "a fat man" (*hutotte iru hito*), "a store near..." (*...no chikaku ni aru mise*), and "the man in the red jacket" (*akai uwagi o kiteiru otoko no hito*). It is true that there are alternative ways to express the above in Japanese, but it seems more natural to the authors to use sentence modification in the above examples. If it is true that Japanese offers more environments for sentence modification, the "hierarchical" expansion of sentences using this structure may occur more easily than one might expect, after learners overcome the initial period of non-use mentioned in section (c) above. This preference for hierarchical structure in Japanese may come from the fact that Japanese is an agglutinating language. This area seems worth investigating further.

5-3. On the *decrease* of the ratio of error-free T-units per utterance

Let's take a closer look at the fact that the ratio of error-free T-units decreased from I-1 to I-6. This means, in more simpler terms, that the correctness of speech per sentence has decreased in this data set. In order to investigate what this means, the corresponding figures for the length of T-unit (total number of words/ total number of T-units) and the "hierarchical" expansion of sentences (total number of S/ total number of T-units) were compared with the ratio of the correctness of sentences for each subject. Table 4 shows the result of I-6, comparing three different categories.

Table 4. Grammatical correctness, length of T-unit, and hierarchical expansion of sentences compared

| Ss' code    | E     | D     | C     | F    | B    | A    |
|-------------|-------|-------|-------|------|------|------|
| efT/all U   | 0.25  | 0.25  | 0.30  | 0.39 | 0.44 | 0.67 |
| all W/all T | 15.31 | 11.47 | 10.00 | 8.28 | 8.94 | 9.89 |
| all S/all T | 2.13  | 1.67  | 1.44  | 1.17 | 1.06 | 1.59 |

The figures in the top category (efT/allU) are presented, from left to right, in the order of the lowest to the highest ratio correct. The second category is the length of T-unit, the number of which generally decreases from left to right (even though subject B performed slightly better than subject F), except for the last subject A. Comparing the first two categories, we see that subject E who demonstrated most number of words in a T-unit has the least accuracy rating. As we scan the table from left to right, we see that the number of words per sentence decreases, and accuracy rating for corresponding Ss increases. In other words, the longer the Ss' sentence is, the more likely errors occur. The third category is the "hierarchical" complexity of sentences, and as in the case of the length of T-unit, the accuracy rating improves as the complexity decreases. Subject A who scored highest in accuracy does not follow the general tendency in either of the categories. Instead of placing the lowest in the other two categories, his figures place him in the middle of the group.

This result agrees with Ishida's (1991) findings that as learners spend more time in classroom, the number of words per utterance as well as the number of types of sentences increase, and errors also increase correspondingly.

What this crossover of accuracy and length of T-unit means may be that at this stage of interlanguage development, while Ss struggle to say more complex



sentences, their performance lag behind. Within the constraint of spontaneous speech, the more complex their sentences are, the more risk they have to take of sacrificing grammatical correctness. This result may also show different learner strategies: subject E may be the most risk-taking in this group. Simply put, Ss may be having trouble "keeping up" the accuracy with the complexity of their own production. The exceptional subject A may be at a stage where he is starting to have more control over accuracy as compared to other Ss.

## 6. Conclusion

This study collected the data of longitudinal development of JSL learners' oral production and quantitatively analyzed the results. The results were expected to indicate some of the quantitative elements of what language teachers impressionistically understand as development. Statistics indicated that learners' sentences become longer and structurally more complex as the learning stages progress. However, contrary to our expectation that the structural complexity would comprise of both hierarchical and horizontal expansion of sentences, the latter was not observed. The seemingly reasonable prediction that learners' interlanguage development will be accompanied by increasing rate of correctness was also denied in the current set of spoken data. We interpreted this phenomena as the correctness "lagging behind" learners' efforts to produce more complex structures.

Here are some points that need further investigation in order to better understand the picture of JSL acquisition:

- 1) To have follow-up data collection and analysis of the present six subjects and see whether the horizontal expansion increases, and also how grammatical correctness changes.
  - 2) To compare and contrast the present results with data from other tasks.
  - 3) Re-evaluate the analysis tools, the S-nodes and the T-units, and their application to analyzing Japanese data.
  - 4) As mentioned above, analyze the qualitative change in learners' speech.
  - 5) Obtain learners' written data to support or complement spoken data.
- Currently the areas (1) and (4) above are being investigated. It is hoped that some insights on JSL acquisition are gained through such efforts.

## Appendix A

Grammatical points covered and cumulative hours of  
classroom instruction prior to each interview

(September 1989). (0 hours)

*Nihongo Shoho* Lessons 1 - 9  
nominal sentences --wa--desu, indicators *kore*, *sore*...etc.,  
--ga aru/iru, adjectives, counters, verbal sentences, linking  
adjectives

Interview 1 - November 1989. (60 hours)

*Nihongo Shoho* Lessons 10 - 16  
past tense, (*shi*)ni kuru/iku, te-form of verbs and linking verbs with  
te-form in --te -- suru, --shitekudasai, --shiteiru--, --toki, dictionary  
form of verbs, sentence modifiers

Interview 2 - February 1990. (110 hours)

*Nihongo Shoho* Lessons 17 - 25  
--te iru/--te aru, volitional form of verb, --soo (hearsay, condition),  
potential form of verb, comparison and contrast

Interview 3 - May 1990. (180 hours)

*Nihongo Shoho* Lessons 26, 27, 29 - 31  
invitation/ permission/ prohibition/ obligation, cause, causative,  
passive

(summer break)

*Nihongo Shoho* Lessons 28, 32-34 (end of book)  
*yoo/rashii*, conditionals, honorific expressions, informal form of  
conversation

Interview 4 - November 1990. (250 hours)

Collection of lower to mid intermediate level materials were used  
after *Nihongo Shoho*.

Interview 5 - February 1991. (330 hours)

Interview 6 - May 1991. (400 hours)

## Appendix B

### Task contents of the interviews

#### Interview 1 - November 1989

1. Naming nouns, time, date
2. Converting affirmative to negative sentences
3. Referential pointers (name?), *kore*, *are*, *dore*, *kono*, *sono*, *ano*
4. Naming objects with numbers and appropriate counters
5. Repetition
6. Elicited conversation
7. Picture description: a street market

#### Interview 2 - February 1990

1. Listing verbs that are related to the given nouns
2. Making sentences using given verbs (*iku* to go, *denwa o kakeru* to make a phone call, *yakusoku suru* to make a promise/ appointment)
3. Picture description: (a) a scene from a coffee shop, (b) a street market
4. Elicited conversation  
topics: -What did you do on the weekend?  
-Tell me about your country.  
-Describe your room to me.  
-What did you do over the winter break?

#### Interview 3 - May 1990

1. Making sentences with given verbs (*kau* to buy, *yakusoku suru* to make a promise/ appointment, *kekkon suru* to be married)
2. Making a logical story with given sets (three) of pictures for particle and verb connection
3. Picture description: (a) street market, (b) bicycle ride
4. Elicited conversation  
topics: -Tell me about your country.  
-What was the best and the worst that happened to you in Japan?  
-What do you plan to do during the summer break?

#### Interview 4 - November 1990

1. Making sentences with given verbs (*tsutomeru* to be employed, *tomaru* to stay overnight, *yakusoku suru* to make a promise/ appointment, *morau* to receive)
2. Making a logical story with given sets (four) of pictures
3. Picture description (same as Interview 3)
4. Elicited conversation  
topics: -Tell me about your country.  
-What was the best and the worst that happened to you in Japan?  
-What did you do during the summer break?

#### Interview 5 - February 1991

1. Making sentences with given verbs (*tsutomeru* to be employed, *tomaru* to stay overnight, *yakusoku suru* to make a promise/ appointment, *morau* to receive)
2. Making a logical story with given set (four) of pictures

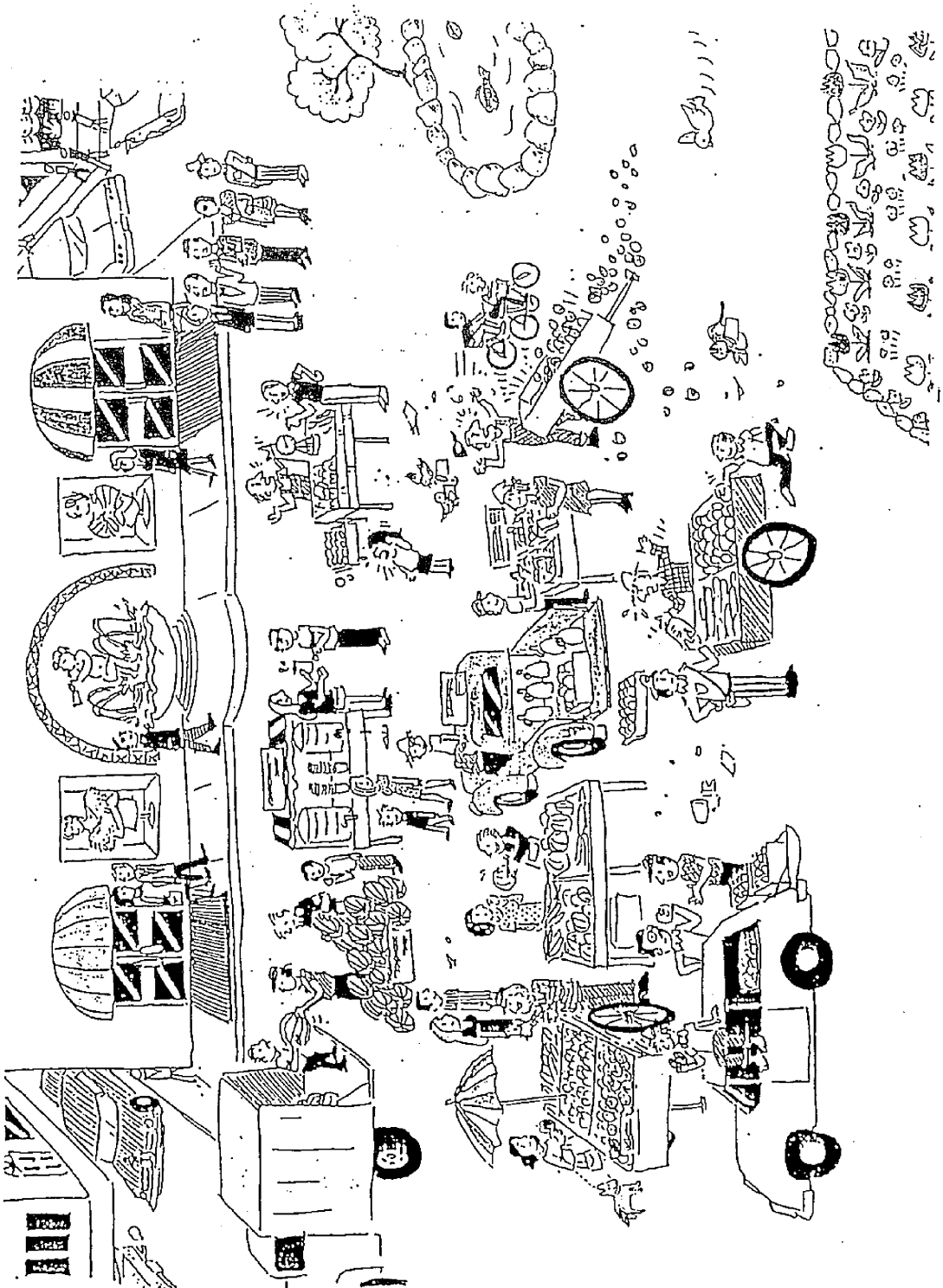
3. Picture description (same as Interview 3)
4. Elicited conversation
  - topics: -Tell me about your country.
  - What are the similarities and differences between your country and Japan?
  - How was your winter break?

Interview 6 - May 1991

1. Making sentences with given verbs (*tsutomeru* to be employed, *tomaru* to stay overnight, *yakusoku suru* to make a promise/ appointment, *morau* to receive)
2. Making a logical story with given set (four) of pictures
3. Picture description (same as Interview 3)
4. Elicited conversation
  - topics: -Tell me about your country, especially about the difference from Japan in the area of religion, politics, culture and/ or habits.
  - How was/is your life at IUJ?

# Appendix C

Picture cue for the description task



## Appendix D

### Example counting of S-nodes and T-units

Here are some of the problematic cases of analysis, and the way they were analyzed in this study.

| <u>example sentences</u>   | numbers of:    |                |
|--|----------------|----------------|
|  | <u>T-units</u> | <u>S-nodes</u> |
| <i>Kore wa ookii market desu.</i>  | 1              | 1              |
| <i>...tai desu.</i>  | 1              | 2              |
| <i>...ni ikimasu.</i>  | 1              | 2              |
| <i>Jibun de tsukutta yasai o urimasu.</i>  | 1              | 2              |
| <i>...to omoimasu.</i>   | 1              | 2              |
| <i>...to iu ... desu.</i>  | 1              | 2              |
| <i>... no desu.</i>  | 1              | 2              |
| <i>... desu ka ... desu ka.</i>  | 2              | 2              |
| <i>X wa ... de Y wa ... desu.</i>  | 2              | 2              |
| <i>Mizu o katte nonde imasu.</i>   | 2              | 2              |
| <i>Kore wa nihon ni aru sonnani ookina<br/>machi demo nai shi sonnani chiisai<br/>machi demo nai machi ni aru ichiba<br/>no shashin to omoimasu.</i> | 2              | 6              |

## References

- Crookes, Graham. 1990. The utterance, and other basic units for second language discourse analysis. Applied Linguistics 11:183-199.
- Doi, Toshiyuki and Kaoru Yoshioka. 1990. Speech processing constraints on the acquisition of Japanese particles: Applying the Pienemann-Johnston Model to Japanese as a second language. In Tom Hayes and Kaoru Yoshioka. (eds.). Proceedings of the 1st Conference on second language acquisition and teaching. Language Programs of International University of Japan Vol. 1:23-33.
- Harrington, Michael. 1986. The T-unit as a measure of JSL oral proficiency. Bulletin of the ICU Summer Institute in Linguistics (Tokyo) 19:49-56.
- Higgs, Theodore and Ray Clifford. 1982. The push toward communication. In Theodore V. Higgs. (ed.). Curriculum, Competence, and the Foreign Language Teacher. ACTFL Foreign Language Education Series Vol. 13:57-79. Lincolnwood, Ill. National Textbook Company.
- Ishida, Toshiko. 1991. *Furansugo washa no nihongo shuutoku katei*. (Acquisitional process in Japanese by French speaking university students.) Nihongo Kyooiku 75:64-77.
- Japan Foundation, The. 1981. Nihongo Shoho.
- Nagatomo, Kazuhiko. 1990. *Goyoo bunseki kenkyuu: nihongo no chuukan gengo no kaimei ni mukete*. (Investigating error analysis: Towards the understanding of Japanese interlanguage.) *Daini gengo to shiten no nihongo no kyooju, gakushuu katei no kenkyuu*. (Studies of the teaching and the learning processes of Japanese as a second language.) *Heisei gannendo kagaku kenkyuu hojokin kenkyuu seika hookokusho*. (A report of the research for the 1989 Scientific Research Fund) 1-53. Hiroshima University.
- Pienemann, Manfred and Malcolm Johnston. 1987. Factors influencing the development of language proficiency. In David Nunan, ed. Applying second language research. Adelaide, Australia: National Curriculum Resource Centre, Adult Migrant Education Program Australia.
- Shimura, Akihiko. 1989. *Nihongo no Foreigner Talk to nihongo kyooiku*. (Foreigner Talk in Japanese and teaching of Japanese). Nihongo Kyooiku 68:204-214.
- Yoshioka, Kaoru. 1991. The acquisition of Japanese particles: An effort to test the Pienemann-Johnston Model with three measurements. Unpublished Master's thesis. University of Hawai'i at Manoa.
- Yoshioka, Kaoru and Toshiyuki Doi. 1989. *Joshi no shuutoku ni okeru gengo unyoojoo no seiyaku (II) --Pienemann-Johnston Model no nihongo shuutoku kenkyuu e no ooyoo* (Speech processing constraints on the acquisition of Japanese particles (II): Applying the Pienemann-Johnston Model to Japanese as a second language.) Paper presented at *Nihongo kyooiku gakkai taikai*. Showa Women's University, Tokyo.