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The Accuracy Order of Japanese Particles

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Many studies have been done concerning the accuracy and the acquisition orders in ESL over the last twenty years; however, relatively few have been done in JSL. This paper reports on the accuracy order of Japanese particles, using the written data from JSL students at an American university.

All the particles used by the subjects in their compositions on a given topic are collected, and the ranges of the population mean percentages of the appropriate use of the particles are calculated, with the level of significance set at .05. After this procedure, particles with a range under 0.2 (20 percent) are extracted and analyzed. There are seven of these: *wa*, *no*, *ni*, *ga* (case), *o*, *ga* (conj.), and *kara* (conj.).

It is found that in the case of the learners at the beginning intermediate level, there are three different levels of accuracy among the seven particles. *Ga* (conj.) and *kara* (conj.) are most accurately used, and *ni* and *wa* are in the second group. The last group includes *ga* (case). *No* may be in either the first group or the second group. *O* appears to be in the second group, but might be in the third ($p<.05$).

These results are consistent with Dulay and Burt's findings that the accuracy order is typically formed of groups of grammatical structures which share very close levels of accuracy, rather than a linear order (Dulay and Burt, 1975).

As to the accuracy order among three of the most frequently used particles, *ga* (case), *wa*, and *o*, the results correspond to the findings by Doi and Yoshioka (1987): *wa*>*o*>*ga* (case). This paper also presents an analysis, based on functional categories, of the learners' errors in the use of *ga* (case), *wa*, and *o*.

INTRODUCTION

It is often said that one of the most difficult aspects of Japanese is particles, since there are quite a few of them in Japanese and each serves more than one function. It is also

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true that particles play a crucially important role in communication, because they indicate the relationship of the preceding word(s) to the following word(s) or to the rest of the sentence.

In this paper, I focused on the Japanese particles produced by Japanese as a second language (JSL) students and tried to extract the accuracy order of Japanese particles.

It is still controversial whether *accuracy order* and *acquisition order* are to be equated or not. Accuracy order is the order in which learners accurately produce the grammatical structures of a target language (TL) at a certain point of time. On the other hand, acquisition order is the order in which learners acquire the grammatical structures of a TL chronologically.

In their morpheme studies Dulay and Burt (1973, 1974, 1975, 1980) assume that the accuracy order corresponds to the acquisition order on the grounds that the more accurately an item is used, the earlier it was acquired. However, many other researchers, such as Larsen-Freeman (1975) and Hatch (1978, 1983) suggest that the term "acquisition order" be restricted to orders obtained from longitudinal studies and the term "accuracy order" be used to refer to the results of cross-sectional studies; it is necessary to distinguish the acquisition order from the accuracy order.

Since there is not a sufficient theoretical or empirical basis for assuming that those two orders can be equated with each other, following Larsen-Freeman, Hatch, and some others, accuracy order in this study is distinguished from acquisition order.

There are many studies concerning acquisition order and accuracy order in ESL (English as a second/foreign language), with relatively few in JSL (Japanese as a second/foreign language). Several of those studies indicate that although classroom teaching or formal instruction may develop learners' L2 (second language) knowledge, it does not affect the natural order of SLA (second language acquisition) (Fathman, 1975, 1978; Krashen et al., 1976; Schumann, 1978; Turner, 1979; Pica, 1983; Ellis, 1984, 1989; Pienemann, 1984).

Using Ellis's terms, we can say that the overall *sequence* of development is not affected by classroom teaching, and the *order* of development, which is individual differences in acquiring specific grammatical structures of a language, is hardly affected either (Ellis, 1985: 215–47).

Although those findings should be considered tentative, I believe that what are needed are more studies on these issues of acquisition order and accuracy order in JSL; the results of such studies would be a great help in the processes of both syllabus design and classroom teaching. It is hoped that this study will make some contribution to the field of JSL in this respect.

Method

Subjects

The subjects in this study were thirty-eight American university students enrolled in a second-year Japanese course. Their ethnic backgrounds were not identical, nor was English the first language for all of them. However, since English was one of the most

comfortable languages for all thirty-eight subjects, I counted them as one group in this study.

Data

All the data were from the composition section of a weekly quiz which was given in a regular Japanese class. The quizzes were regularly given after each lesson in the textbook, *Intensive Course in Japanese: Intermediate.* The quiz used in this study was on lesson six and the topic was natural disaster. In the composition part of the quiz, the students were given alternative topics to write on: " your view of natural disaster " or " the Japanese view of natural disaster."

Items Examined

All the particles used by the subjects in this data were collected. The particle *te* was not included in this study, since in teaching JSL it is considered a part of verb and adjective conjugation, and the subjects were taught in this way.

Data Analysis

For each item, the appropriate and the inappropriate uses, both in obligatory contexts and in non-obligatory contexts, are counted as one and summed up to calculate a group percentage for the appropriate use of each Japanese particle by the subjects. The percentage of the appropriate use of each particle for each subject was not calculated, since each subject used a particle rather few times (0–15), and if calculated the statistical reliability of those percentages was expected to be very low.

The following method was used to calculate the percentage of appropriate use of each particle:

(1) the number of correct suppliances
(2) the number of non-obligatory contexts with inappropriate suppliances
(3) the number of obligatory contexts

$$\% = \frac{(1)}{(2)+(3)} \times 100$$

After calculating the percentage for each particle, an interval estimation was calculated in order to (1) find the ranges of the population mean percentages of the appropriate use of the particles and (2) eliminate the numbers whose statistical reliability was not high enough to use for research, with the level of significance set at .05. The criteria of whether to keep or eliminate was based on whether the range/interval of a population mean percentage was under 0.2 (20%) or not.

The following equation was utilized:

$$\pi = P \pm t_{0.025}\sqrt{\frac{P(1-P)}{n}}$$

P=sample proportion
t=t value
n=no. of sample

After this normal approximation procedure, the acquisition order among the remaining particles was considered. For three of the most frequently used particles—

the subject marker *ga*, the topic marker *wa*, and the object marker *o*—all of which were among those remaining particles, both appropriate and inappropriate uses were re-categorized and considered, based on the functional subcategories within each of these three particles.

Results and Discussion

Accuracy Order

The group percentage for the appropriate use of each Japanese particle is shown in Table 1. However, as mentioned in the previous section, many of the group percentages, such as *e*, *kara* (case), *yori*, *de*, *ya*, etc., were eliminated.

The remaining particles and their intervals are shown in Table 2, which is given

Table 1 Group Percentages of the Appropriate Use of Each Particle

Particle	Appropriate use no.	Inappropriate use no.	%
*wa**	241	53	82.0
*no**	165	21	88.7
*ni**	109	25	81.3
*ga** (case)	106	62	63.1
*o**	70	21	76.9
e	6	2	75.0
to (case)	90	6	93.8
kara (case)	3	4	42.9
yori	4	0	100.0
de	55	18	75.3
ya	2	0	100.0
mo	28	7	80.0
sae	2	0	100.0
shika	1	0	100.0
ba	21	4	84.0
to (conj.)	29	9	76.3
keredo	18	0	100.0
*ga** (conj.)	24	1	96.0
node	8	0	100.0
*kara** (conj.)	27	1	96.4
shi	3	0	100.0
nagara	2	0	100.0
tari	5	1	83.3
made	10	0	100.0
toka	3	0	100.0
hodo	2	0	100.0
dake	3	0	100.0
kamo	4	0	100.0
yori	2	0	100.0

* The remaining particles after an interval estimation.

Table 2 The Remaining Particles after an Interval Estimation and the Ranges of the Population Mean Percentages of the Appropriate Use of the Particles

Particle		Percentage range
ga (case)	63.1±7.3	55.8–70.4
ga (conj.)	96.0±8.1 (8.07)	87.9–100 (*87.93*–100)
no	88.7±4.5	84.2–93.2
o	76.9±8.8	68.1–85.7
ni	81.3±6.6 (6.60)	74.7–87.9 (74.70–*87.90*)
wa	82.0±4.4	77.6–86.4
kara (conj.)	96.4±7.2	89.2–100

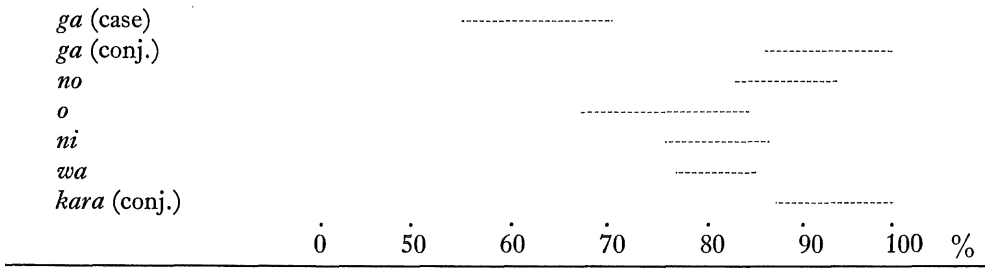

Fig. 1 The Remaining Particles after an Interval Estimation and the Ranges of the Population Mean Percentages of the Appropriate Use of the Particles

in graphic form in Fig. 1. Each line shows the range of the population mean percentage of the appropriate use for the particle. For example, the range in the case of particle *ga* is 55.8–70.4 percent. This means that the population mean percentage of appropriate use in the case of particle *ga* is neither below 55.8 percent nor above 70.4 percent, but must be some point between 55.8 percent and 70.4 percent.

As Fig. 1 shows, it is difficult to find the accuracy order among those particles because the range of each particle overlaps with others. However, it appears that there are at least two groups of particles which have different levels of accuracy: *ga* (conj.), *no*, *kara* (conj.), and *o*, *ni*, *wa*. The first three are used more accurately than the last three. *Ga* (case) may be in the latter group or in a third group with some other particles.

More precisely examining Table 2, we find that there are three different levels of accuracy among the seven particles. *Ga* (conj.) and *kara* (conj.) are most accurately used, and *ni* and *wa* are in the second group. The last group includes *ga* (case). *No* may belong to either the first group, *ga* (conj.) and *kara* (conj.), or the second group, *ni* and *wa*. *O* appears to be in the second group, but might be in the third ($p<.05$).

ga (conj.), *kara* (conj.) > *ni*, *wa* > *ga* (case)

↖ or ↗ *no*; ↖ or ↗ *o*

The results show that the accuracy order of Japanese particles forms into groups of particles which share very close levels of accuracy, rather than a linear order. It is consistent with Dulay and Burt's proposition that in considering accuracy order, rather than list the grammatical structures in linear order, it is better to group them together with the groups forming "the hierarchy of acquisition" (1975, 1980). In their third cross-sectional study, Dulay and Burt conclude that groups of English grammatical morphemes are typically "acquired" together in a certain order during the acquisition process rather than one at a time in linear order (1975).

As for the accuracy order among *wa*, *o*, and *ga* (case), it appears that *o* comes at a point somewhere above *ga* and below *wa*; this is consistent with the results of research by Doi and Yoshioka (1987), who investigated the accuracy order of *ga*, *wa*, and *o* in different grades by using repetition tests. Their results for the correctly repeated usage of *ga*, *o*, and *wa* by second-year JSL learners are 48.3, 51.4, and 61.7 percent, respectively.

wa > *o* > *ga* (case)

Ga (Case), *O*, and *Wa*

In this part of the analysis, the distribution of the errors and the types of errors for the three frequently used particles, *ga* (case), *o*, and *wa*, are examined, based on the functional categories within each of the three particles. The accuracy order of the functions of those three particles is not considered in this study, since the amount of data is insufficient.

Ga

The case particle *ga* is thought of as a subject marker. However, it carries several functions, as follows (Kuno, 1973; Morita, 1980; Russell, 1985):

1. To introduce a new topic/information
   e.g. *Watashi ga Yamada desu.* I am Yamada.
2. To describe a tentative condition or an action which can be observed
   e.g. *Sakura no hana ga saite imasu.* The cherry blossoms are in bloom.
3. To follow the object of a stative transitive verbal
   e.g. (*Watashi wa*) *okane ga hoshii.* I want money.
   Kare wa nihongo ga jōzu da. His Japanese is very good.
4. To follow the subject in a subordinate clause
   e.g. *Watashi ga soko e itta toki . . .* When I went there . . .
   Watashi ga ikeba . . . If I go . . .
   Watashi ga katta hon The book I bought

The proportion of appropriate and inappropriate uses of *ga* is shown in Table 3. What is found here is that the errors between *ga* and *wa* constitute a large proportion both in the underuse and the overuse of *ga* (50 percent of underuse, 66.7 percent of overuse).

This seems to be the case because not only *ga* but also *wa* is often used following a subject, and it is difficult for many students to make a correct choice as to the context in which *ga* is to be used and in which *wa* is to be used.

Table 3 The Proportion of the Use of *Ga* (case)

Function	Appropriate use	Inappropriate use	
		Underuse	Overuse for
1. To introduce a new topic	33	8 (*wa*—5)	*wa*–24 *no* – 1 *o* – 1
2. To describe a tentative condition or an action	37	4	*to* – 1 *ni* – 2 *mo*– 1
3. To follow the object of a stative transitive verbal	7	3 (*wa*—2)	etc.
4. To follow the subject in a subordinate clause	29	11 (*wa*—6) (*o* —3)	
Total	106	26	36

Another finding is that the overuse of *ga* for *wa* surpasses underuse of *ga* for *wa* (overuse of *wa* for *ga*). This may be the result of the learner's strategy to simplify the system; that is, he/she tends to use *ga* in a context where he/she is not certain whether *ga* or *wa* should be used.

Wa

The particle *wa* is thought of as a topic marker. However, it has additional functions also, as follows (Kuno, 1973; Russell, 1985):

1. To present the topic of a sentence
   e.g. *Watashi wa nihonjin desu.* I am Japanese.
2. To contrast elements, usually with emphasis
   e.g. *Tokyo ni wa ikimasu ga, Osaka ni wa ikimasen.* I'm going to Tokyo, but not to Osaka.

The proportion of the appropriate use and the inappropriate use of *wa* is shown in Table 4. A large proportion of the use of *wa* for function 1 may be a reflection of the natural distribution of the use of *wa*, or it may be the learner's strategy to avoid mistakes, since a sentence which includes *wa* for function 2 tends to be longer than one with *wa* for function 1.

O

The functions of *o*, which is often called an object marker, are as follows (Morita, 1980; *Nihongo kyōiku jiten*, 1985):

1. To express the object of an action
   e.g. *Hon o yonda.* I read a book.
2. To express the place where a movement takes place
   e.g. *Hikōki ga sora o tonde iru.* An airplane is flying in the sky.

Table 4 The Proportion of the Use of *Wa*

Function	Appropriate use	Inappropriate use	
		Underuse	Overuse for
1. To present the topic of a sentence	200	20 (*ga*—15)	*ga*–13 *mo*– 3 *to* – 1
2. To contrast elements, usually with emphasis	41	15 (*ga*— 9)	etc.
Total	241	35	18

Table 5 The Proportion of the Use of *O*

Function	Appropriate use	Inappropriate use	
		Underuse	Overuse for
1. To express the object of an action	70	4	*ga*– 3 *wa*– 2 *to* – 5
2. To express the place where a movement takes place	0	0	*ni* – 1 etc.
3. To express a departure point	0	0	
4. To express passing time	0	0	
5. To follow the object of a causative verbal	0	0	
Total	70	4	14

3. To express a departure point
   e.g. *Asu Tōkyō o tatsu.* I'm leaving Tokyo tomorrow.
4. To express passing time
   e.g. *Watashi wa yonenkan o Sendai de sugoshita.* I spent four years in Sendai.
5. To follow the object of a causative verbal
   e.g. *Watashi wa kodomo o hatarakaseta.* I made my child work.

As shown in Table 5, the functional distribution of the use of *o* is completely concentrated on function 1, which is to express the object of an action. Reasons similar to the use of *wa* are possible, that is, a reflection of the natural distribution of *o* or the learner's strategy to avoid mistakes.

The use of *o* for function 1 seems rather easy for English speakers, since the learners tend to consider the nominal followed by *o* the object of a sentence. In other words, they tend to use *o* preceding what they feel is a transitive verb. However, this is not always correct. One finding here is the overuse of *o* in place of *to*, which is used in quoting what is said, or in expressing a speaker's thought or feeling. The following are examples of the overuse of *o* in place of *to* and their translations into English:

Baka o ittara . . . After he said, " Stupid! " . . .
Okashii o omou. I think it's strange.

The errors mentioned above are considered to be the result of the learner's strategy to simplify the system or an interference from English.

CONCLUSION AND FUTURE DIRECTIONS OF RESEARCH

I tried to extract the accuracy order of Japanese particles. What was found in this study is:

1. In the case of learners at the beginning intermediate level, there are three different levels of accuracy among the seven particles *ga* (conj.), *kara* (conj.), *no*, *ni*, *wa*, *o*, and *ga* (case). *Ga* (conj.) and *kara* (conj.) are most accurately used; *ni* and *wa* are used more accurately than *ga* (case) but less accurately than *kara* (conj.) and *ga* (conj.). *No* may be in either the first group or the second group. *O* appears to be in the second group, but may be in the third one ($p<.05$).
2. It is hypothesized that the accuracy order of Japanese particles falls into groups of particles that cluster together very closely with levels of accuracy (the hierarchy of accuracy) rather than in a linear order. This is consistent with Dulay and Burt's findings (1975). However, since the amount of data in this study is rather small and the results may be due to the statistical method of analysis used, much more research on this point should be done to draw a conclusion.
3. As for the accuracy order among *ga* (case), *o*, and *wa*, it appears that *o* comes at a point somewhere above *ga* and below *wa*. This is consistent with the results of research by Doi and Yoshioka (1987).

Many errors between *ga* (case) and *wa* were found. The overuse of *ga* in place of *wa* is particularly conspicuous. It seems that this is the result of the learner's strategy to simplify the system.

The misuse of *o* in place of *to* was also found. It is considered to be the result of the learner's strategy to simplify the system or an interference from English.

Because of the small amount of data, the findings are somewhat tentative, and this should be considered a pilot study. Further research, both cross-sectional and longitudinal and using a large group of subjects, is needed to establish the accuracy and acquisition orders for many more Japanese particles. It is also necessary to devise an experimental method which will induce a certain number of spontaneous uses of each particle.

Concerning the comparison of accuracy orders in written and spoken data, several studies in ESL show that the accuracy order in the written mode is very similar to the order observed in the oral mode, at least with respect to free composition (Andersen, 1976; Krashen et al., 1978; Dulay and Burt, 1980). However, there is no such study, to my knowledge, in JSL. Research on this issue in JSL is needed.

Since the accuracy order may vary among the functions of each particle, as Russell's study shows (1985), it is necessary to investigate the accuracy order of the functions of each particle. We also need baseline data on the frequency of use of these particles among native speakers of Japanese.

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