

Japanese Cloze Tests: Toward Their Construction

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This study aims to construct Japanese cloze tests to be used by learners of Japanese as a second/foreign language. This study deals with the issue of “word boundaries” in counting and deleting Japanese “words” for cloze test construction, the issue of scoring, and the issue of linguistic categories of deleted words. This study examines correlations between the scores of two types of cloze tests (a morpheme version and a phrase version cloze test) by two types of scoring (an “acceptable” word method and an “exact” word method) and other tests (seven quizzes and two midterm examinations). A morpheme-version cloze test by an “acceptable” word scoring was significantly correlated with the other test scores, while a phrase-version test based on the definition of “words,” which has generally been used in past studies, did not show significant correlation with the other tests.

This study also found that Japanese cloze tests measured the learners’ ability to employ their knowledge of language systems not only at the intra-sentential level, but also at the level of integration of inter-sentential information and sociocultural knowledge.

The results of this study suggest that morpheme-version cloze tests by an “acceptable” word scoring method are valid for predicting the language ability of the learners of Japanese as a second/foreign language.

This study aims to construct Japanese cloze tests and to determine their utility as an assessment tool of reading proficiency.

Review of Literature

The cloze test in which “words are removed from a reading passage at regular intervals, leaving blanks” (Richards, Platt, and Weber, 1985) has been widely used in sec-

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ond-language reading research and pedagogy (Alderson, 1979; Bachman, 1982, 1985; Barnett, 1986; Bensoussan and Ramraz, 1984; Block, 1986; Chihara, Oller, Weaver, and Chavez-Oller, 1977; Clarke, 1978; Cunningham and Caplan, 1982; Devine, 1987; Lange and Clausing, 1981; Lapkin and Swain, 1977; Oller, 1972, 1973; Tregar and Wong, 1984).

The cloze procedure has been used in the field of teaching Japanese as a foreign language (hereafter, JFL). However, it has been limited merely to the deletion of specific items, such as particles, which indicate grammatical relation, or Chinese characters. The traditional Japanese cloze procedure does not employ fixed or rational deletions of every kind of word in a text. There have been, in fact, very few studies that deal with Japanese cloze tests (Brière, Clausing, Senko, and Purcell, 1978; Carson, Carrell, Silberstein, Kroll, and Kuehn, 1990; Grundin, Courtney, Langer, Pehrsson, Robinson, and Sakamoto, 1978; Grundin, Courtney, Langer, Pehrsson, Robinson, and Sakamoto, 1978; Koda, 1989). Brière et al. (1978) and Koda (1989) used cloze tests with learners of Japanese as a foreign language, and Carson et al. (1990) used it on Japanese native speakers.

In order to construct Japanese cloze tests, the following three issues need to be considered: 1) sentence segmentation, 2) scoring, and 3) what the cloze measures (linguistic categories of the deleted words).

Research on Sentence Segmentation

In order to construct a cloze test in Japanese, it is necessary to decide upon a definition of the term "word." Due to the fact that Japanese is an agglutinative language, the written language does not mark lexical boundaries. That is, there is no tradition of word boundaries in orthographic convention. Japanese sentences are typically written without any spaces between words. The issue of "word boundaries" in Japanese is ignored in the literature (Brière, Clausing, Senko, and Purcell, 1978; Grundin, Courtney, Langer, Pehrson, Robinson, and Sakamoto, 1978; Koda, 1989) except by Silberstein (1991). Silberstein decided to group nouns, verbs, and particles together as one unit. Her rationale for this decision was that an expert in Japanese-language instruction had noted that romanized Japanese-language texts adopt a common convention: nouns, verbs, and particles are grouped together. What would be, for example, a three-word string in English (e.g. "might have come") is coded as a single unit in Japanese. On this basis, Silberstein counted and deleted Japanese "words."

Scoring Issues

In scoring a cloze test, two methods have been used: an "exact" word method (hereafter "exact" method), in which only the words originally deleted from the text are allowed, and an "acceptable" word method (hereafter "acceptable" method), in which any word considered syntactically and semantically appropriate is counted as correct. Carson et al. (1990) used an "exact" method based on Oller's (1979) review of cloze research, which indicated that although percentage scores may be lower with

an "exact" method, rank order should remain the same with the "exact" method or the "acceptable" method. Brière et al. also used an "exact" method.

Oller (1973), however, recommends using the "acceptable" method rather than the "exact" method if the learners are non-native speakers, due to its higher correlation with the part scores and total score on the UCLA ESL Placement Examination test. Alderson (1983) demonstrated that an "acceptable" method is more reliable than an "exact" method. Based on Alderson's study, Koda (1989) used the "acceptable" method for learners of Japanese as a foreign language.

What the Cloze Measures: Linguistic Categories of the Deleted Words

Research on the reading process found that as proficiency increased the readers tended to process large units of language systems (Clarke, 1978; Cziko, 1980; Devine, 1987; Hodes, 1980; Mott, 1980; Rig, 1988). That is, proficient readers integrate their knowledge of various language systems across sentences including phonological, syntactic, semantic, pragmatic, and socio-cultural knowledge, while less proficient readers heavily rely on local linguistic clues in a single sentence.

Reading assessment needs to reflect this developmental change in the readers. The cloze procedure has been found to be related to both integrative and holistic reading ability.

There is, however, controversy about what the cloze measures. There are two groups of researchers who claim that the cloze measures language ability. The first group argues that the cloze operates on the intra-sentential level, measuring lexical and syntactic ability in a sentence (Alderson, 1979, 1984; Porter, 1978; Shanahan, Kamil, and Tobin, 1982). Studies by researchers in the second group indicate that the cloze measures the integration of inter-sentential information (Bensoussan and Ramraz, 1984; Brown, 1983; Chihara, Oller, Weaver, and Chavez-Oller, 1977; Lange and Clausen, 1981). Other studies have found cloze test scores significantly correlated with reading comprehension test scores (Bachman, 1982; Lapkin and Swain, 1977; Oller, 1972).

Previous studies have generally used fixed-ratio (every n-th word) deletion (Brière, Clausen, Senko, and Purcell, 1978; Carson, Carrell, Silberstein, Kroll, and Kuehn, 1990; Koda, 1989). In these studies, the issue of whether or not all deleted words carry the same amount of information or are equally redundant has not been considered. Bachman (1985) examined the characteristics of deleted words in fixed-ratio passages of English cloze tests and found that the fixed-ratio cloze test measures two types of the ability: comprehension ability that ranges within the clause, and extra-textual ability. In his study, the frequency of the deletion which measures the learner's ability to comprehend cohesive structure of the text (i.e., across clauses and sentences) was relatively low.

Jonz (1990), contrary to Bachman, found that the fixed-ratio English cloze procedure is sensitive to constraints on response ranging well beyond the level of local syntax. According to Jonz' categorization, constraints on cloze response derive from lexical

selections (content words and extra-textual knowledge), textual cohesion (cohesion across clauses but within a sentence, and cohesion across sentences), and syntax (within a clause).

When a Japanese cloze test is constructed, an examination of the linguistic categories of the deleted word must be conducted in order to inquire whether or not they are evenly distributed in these three groups. No research has yet shown that Japanese cloze passages demonstrate the same characteristics as the English cloze passages in terms of the distribution of the linguistic categories of the deleted words.

Research Questions

This study attempted to answer the following three research questions:

1. Which cloze test seems to be a better predictor of language ability among learners of Japanese as a foreign language: a cloze passage with deletions at the morpheme level, or a cloze passage with deletions at the phrase level?
2. Which scoring method is more appropriate in a cloze test of Japanese as a foreign language: an "exact" method or an "acceptable" method?
3. What are the linguistic categories of the deleted words?

There are two problems related to the definition of "words." First, the existing literature lacks a clear definition of a "word." Silberstein (1991) counts and deletes nouns, verbs, and particles together based on a content analysis of Japanese textbooks done by one Japanese-language instructor. However, the present author has reviewed seven Japanese-language texts for beginners (Alfonso and Nîmi, 1968; Han, 1983; Jordan, with Noda, 1990; Mizutani and Mizutani, 1977; Nissan Motor Co., 1984; Yoshida, Kuratani, Yamaguchi, Okura, Nishide, Haruna, Teramura, Saji, Tamamura, and Okada, 1973; Young and Nakajima-Okano, 1967), one book on Japanese syntax (Teramura, 1984), and one report on the vocabulary of modern Japanese newspapers (Kokuritsu Kokugo Kenkyûsho, 1971), and has discovered no common convention of spacing between the "words" in these sources. Mizutani and Mizutani (1977), Yoshida et al. (1973), and Young and Nakajima-Okano (1967) deal with a noun phrase (i.e., a noun and a particle) as a unit. Alfonso and Nîmi (1968), Han (1983), Jordan (1990), Nissan (1984), and Kokuritsu Kokugo Kenkyûsho (1971) deal with each morpheme as an independent unit. (There is even more inconsistency in definition of "word boundaries" of a verb phrase among the authors of these books.)

Second, employing Silberstein's definition of "word unit," it is quite possible that one of the chunks would be a much longer series of words than the other chunks. For example, a verb phrase that consists of an inflected verb form and auxiliaries would be much longer than a noun phrase, which usually consists of a noun and a case-marking particle (e.g., the verb phrase "*it-te shimat-ta yô da*" (seems to have gone), and the noun phrase "*watakushi o*" (first pronoun and an accusative particle).

Kaga (1987), in an attempt to define a "word" unit, counted a combination of a content word and any functional word as one unit, like Silberstein (1991). However Kaga, unlike Silberstein, dividing a verb phrase into smaller units counted an auxil-

iary which was originally a content word as one word. Thus, “*nobot-te miyô*” (try to climb), according to her, was counted as two words “*nobot-te*” (climb and) and “*miyô*” (let’s see). Kaga discusses the alternative in which a content word or a morpheme is counted as one complete unit in Japanese as it is counted in English. She emphasizes the necessity of further research to define what “word boundary” is.

As these studies indicate, there is no clear-cut definition of how to set “word boundaries” in Japanese. Because of the agglutinative characteristics of Japanese, which cause difficulty in defining “word boundaries,” it might be possible to establish a different rationale for the definition of “words” depending on one’s research purpose. In constructing a Japanese cloze test, for example, which measures a learner’s reading strategies (such as the utilization of semantic or syntactic cues), it can be argued that lexical items that provide semantic cues, and functional words that indicate grammatical relation (e.g., particles) should be counted as independent words. Thus, “words” in a Japanese cloze test might need to be defined at the morpheme level rather than at the phrase level (such as a noun phrase or a verb phrase).

This pilot study used two types of definitions of a “word” in order to examine which type of cloze tests can successfully predict the language ability of the learners of Japanese as a foreign language. One definition operationalized a morpheme as one unit (morpheme version), and the other defined a phrase as one unit (phrase version). In addition, the study included content analysis of the passage in order to examine the linguistic categories of the deleted words and to assure that the Japanese cloze passage for this pilot study measures the reading ability of both lower and higher levels.

As has been seen in the previous section, there is no consensus on scoring procedures. The issue of which method (an “exact” or an “acceptable” method) is more reliable has also been left unanswered. This pilot study, therefore, used these two types of scoring procedures in order to examine which method is more reliable.

Definition of Terminology

A “phrase” is defined in this study as a unit that consists of a content word and one or more related function words. A noun phrase usually consists of a noun and a particle. A verb phrase consists of an inflected verb form and some auxiliaries (such as aspect markers, evidential markers), and sentence particles.

“Morpheme” is defined as the smallest meaningful unit in a language (Richards, Platt, and Weber, 1985). Content words and function words are counted as independent individual morphemes. Verbal “morphemes” are particularly difficult to identify: their definition varies among Japanese linguists and grammarians, as does the definition of an “inflected part” of a verb (Teramura, 1984). This study follows Teramura (1984) in considering the elements which express “modality” (i.e., the speaker’s attitude toward the proposition) as separate morphemes from the inflected part of a verb, which belongs to the “proposition.” The distinction between modality and proposition, according to Horie (personal communication) is an accepted practice among Japanese grammarians. This study also accepts Teramura’s (1984) claim that

passive and causative markers belong to the proposition, and thus, should be counted as parts of a verb. Tense markers and negation markers are categorized as modality by Teramura. This study, however considers them as a part of the verb, due to the fact that they can appear in the position of the elements which express proposition as well. Appendix A shows some examples of independent and dependent morphemes.

Research Design

This study attempted to find the answers to the three research questions by examining correlations between cloze test scores and other tests which were given to university learners of Japanese as a foreign language. The average score of two mid-term examinations and the average score of seven quizzes were used. The two mid-term examinations consisted of discrete point tests, including: Japanese-English sentence translation (which examined the learners' knowledge of Japanese syntax and vocabulary); English-Japanese word translation (which examined vocabulary knowledge); yomigana tests (which had the learners provide appropriate pronunciation of Chinese characters whose pronunciations varied in combination with different characters), and writing tests of Chinese characters. The last two tests examined knowledge of Chinese characters.

The seven quizzes (one per week) were dictations, in which an instructor read a passage out loud (sentence by sentence) and the learners were to write it down using Chinese characters and the two other syllabary writing systems (hiragana and katakana). Dictation as an integrative test has been used in foreign language classrooms for a long time. The scores on dictation tests have been found according to Oller (1971, 1972) to be correlated with other test scores, such as vocabulary tests, sound discrimination tasks, and grammar tests.

Participants

Fourteen native speakers of English who were taking Advanced Japanese I at the University of Southern California were used in this study. The participants were randomly assigned to two groups: a morpheme-version cloze group for group 1, and a phrase-version cloze group for group 2.

Materials

A reading passage which was written by the examiner was used in this study. A copy of the passage appears in Appendix C. The difficulty level of the passage was equivalent to the intermediate level, in terms of vocabulary and structures. The cloze passage contained 306 morphemes in the morpheme version, and 159 phrases in the phrase version. The cloze passage was examined by three instructors of Japanese in order to determine if there were any unnatural constructions that would be unfamiliar to native speakers of Japanese. All Chinese characters in the text were provided with yomigana (pronunciation) to avoid having comprehension affected by pronunciation knowledge.

Every seventh item (word or morpheme) was deleted from the passages. The first sentence was left intact. The passages had 42 deletions and 21 deletions in the morpheme and the phrase versions, respectively.

Results

The results of this study are shown in Tables 1 and 2 below.

Table 1 Scores of the Cloze Test for Non-native Speakers: Group 1 (Morpheme Group)

Subject (N=7)	Scores by "acceptable" word method	Scores by "exact" word method
1	35 (85%)	30 (73%)
2	31 (76%)	24 (58.5%)
3	29 (70%)	25 (60.9%)
4	28 (68%)	21 (51.2%)
5	28 (68%)	20 (47.6%)
6	19 (46%)	17 (41.4%)
7	14 (34%)	13 (31%)
mean	26.3 (63.71%)	19.57 (51.943%)
S. D.	17.65	13.759

Table 2 Scores of the Cloze Test for Non-native Speakers: Group 2 (Phrase Group)

Subject (N=7)	Scores by "acceptable" word method	Scores by "exact" word method
8	19 (90%)	16 (76%)
9	18 (86%)	12 (57%)
10	15 (71%)	7 (33%)
11	13 (62%)	7 (33%)
12	12 (57%)	10 (47.6%)
13	9 (43%)	8 (38%)
14	5 (23%)	4 (19%)
mean	13 (61.7%)	9.1 (43.37%)
S. D.	23.62	18.736

To check reliability of scoring, a second instructor of Japanese scored them independently, and inter-rater reliability was computed. Inter-rater reliability between the examiner and the other instructor was statistically significant ($r(5) = .977$, $p < .001$, and $r(5) = .987$, $p < .001$ for the morpheme version with acceptable scoring and the phrase version with acceptable scoring, respectively).

A test-retest reliability coefficient of .89 was obtained after a 6-week interval on the same group of the students.

A t-test to examine the difference between the scores by the “acceptable” and the “exact” methods in each group was conducted, with the results shown in Table 3.

Table 3 T-test for the Score Difference between “Acceptable” and “Exact” Word Methods in Each Group

Groups	T ratios
1	t (6)=4.807*
2	t (6)=3.591*

Note: * p<.01.

The t-test indicated that there was a significant difference between the two types of scoring in each group.

The correlation coefficient indicated that, unlike in the findings of Carson et al. (1990), the rank order between the “acceptable” and “exact” methods was not consistent in the phrase-version cloze test ($r(5)=.821$, $p=.024$). The correlation coefficient of the morpheme-version cloze test, however, was significant ($r(5)=.945$, $p=.001$). This means that the rank order between the “acceptable” and “exact” methods was consistent with the morpheme-version cloze test.

The correlation between the cloze scores and the other tests of the non-native speakers was also examined. The results are shown in Table 4.

Table 4 Correlations among the Cloze Scores and Other Tests

	2	3	4	5	6
1. midterms	.908*** (n=14) (p<.001)	.944* (n=7) (p<.01)	.896* (n=7) (p<.01)	.822 (n=7) (P=.023)	.451 (n=7) (P=.311)
2. quizzes	1.0	.881* (n=7) (p<.01)	.837 (n=7) (p=.019)	.746 (n=7) (p=.054)	.456 (n=7) (p=.304)
3. morpheme, acceptable		1.0	.945* (n=7) (p=.001)	n/a	n/a
4. morpheme, exact			1.0	n/a	n/a
5. phrase, acceptable				1.0	.821 (n=7) (p=.024)
6. phrase, exact					1.0

The correlation between the scores of the two midterm examinations and the scores of the seven quizzes was significant ($p<.001$). Correlations between the scores of the midterm examinations and both “acceptable” and “exact” morpheme-version cloze tests were significant, as well ($p<.01$). There was also a significant correlation

between the quiz scores and the morpheme cloze by the "acceptable" scoring method ($p < .01$). In order to examine whether or not the correlation of .881 (the morpheme version in the acceptable scoring method and quizzes) and the correlation of .837 (the morpheme version in the exact scoring method and quizzes) are significantly different, Hotelling t-test for correlated correlation for the same groups of subjects was conducted. The result was $t(4) = .548$, $p = .05$, which did not reject the hypothesis that the r of .881 represented a genuinely higher correlation than the $r = .837$. That is, the morpheme version cloze test in an acceptable scoring method yielded a genuinely higher correlation than the morpheme version in an exact method. Two scoring methods in the morpheme version cloze were correlated as well ($p = .001$). There was no significant correlation between the scores of midterm examinations and the scores of the phrase-version cloze (both "acceptable" and "exact" methods), nor between the quiz scores and the phrase-version cloze.

A content analysis of the cloze passages was conducted in order to examine the linguistic categories of the deleted words, employing the method used by Jonz (1990: 20). The deleted words were categorized into four groups: 1. intra-clause, 2. inter-clause and intra-sentence, 3. inter-sentences, and 4. extra-textual. The first category was further divided into two subcategories: syntactic (1-a) and lexical (1-b) relation. Jonz considers lexis as an indicator of semantic relations, and groups it together with extra-textual elements. These four categories, therefore, were reduced to three: lexical (1-b and 4), textual (2 and 3), and syntactic (1-a). (Appendix B shows some examples of the Japanese morphemes that belong to each category.) The frequencies of the occurrence of words in each category were counted. The results are shown in Table 5.

Table 5 Frequencies of Linguistic Categories

1-a	11
1-b	10
2	7
3	12
4	2

After the totals for categories 1-b and 4, and for 2 and 3 were computed, a chi-square analysis was conducted. The chi-square analysis of the passage indicates that there was no significant difference among the three categories (lexical, textual cohesion, and syntax) ($X^2(2, n=42) = 2.714$, $p = .257$). The frequencies of the deletion of the four categories (intra-clause, inter-clause and intra-sentence, inter-sentence, and extra textual), therefore were relatively evenly distributed.

Discussion

The first research question in this study was: which cloze test seems to be better predictor of language ability in JFL? The phrase-version cloze test did not yield signif-

icant correlations with the test scores on mid-term examinations and quizzes, while the morpheme-version test evidenced significant correlation with these scores (except for the correlation between the morpheme version with exact scoring and quiz scores). Although the number of the informants was not large, the results suggest that the "morpheme" is preferable, in terms of reliability, to the "word" as a unit in constructing a Japanese cloze test.

The second research question was: which scoring method is more appropriate in a cloze test of JFL? Two scoring methods have been used with the Japanese cloze. Brière et al. (1978) and Carson et al. (1990) employed the "exact" method with learners of JFL and Japanese native speakers, respectively. The rationale for employing the "exact" method, according to Carson et al., was Oller's (1979) review of cloze research, which indicated that rank order should remain the same with the "exact" method or the "acceptable" method.

Koda (1989), basing her research on Alderson's study (1979), which found the "acceptable" method correlated more highly with reading comprehension measures, used the "acceptable" method for learners of JFL. Oller (1972) showed that the "acceptable" method yielded higher correlation than the "exact" method with the scores of UCLA ESL Placement Examination test, which consisted of vocabulary, grammar, reading, and dictation tests. Based on his findings, Oller (1973) recommends using the "acceptable" method if the learners are non-native speakers.

This study showed that the "acceptable" scoring method in both morpheme and phrase versions is more highly correlated than the "exact" method with scores on other tests. The results of the study supports Oller's (1973) claim and provide an answer to the second research question: the "acceptable" method is more reliable for non-native speakers.

The third research question dealt with the linguistic categories of the deleted words. Content analysis of the Japanese cloze passage showed that the deleted words were evenly distributed among all the four categories defined by Jonz (1990): intra-clause, inter-clause and intra-sentence, inter-sentence, and extra-textual. This suggests that Japanese cloze tests measure the language ability not only at the intra-sentential level as some researchers claimed (Alderson, 1979, 1984; Porter, 1978; Shanahan, Kamil, and Tobin, 1982), but also at the integration of inter-sentential information as suggested in other studies (Bensoussan and Ramraz, 1984; Brown, 1983; Chihara, Oller, Weaver, and Chavez-Oller, 1977; Lange and Clausen, 1981).

Content analysis of the cloze passage (which has been ignored in the existing literature on Japanese cloze tests), in terms of linguistic categories of the deleted words, must be conducted in advance when a cloze passage is designed. When the distribution is uneven, rational deletion (deletion of the words which is not the exact Nth word, but near the Nth word) might be an alternative to fixed-deletion, so that the frequency of the deleted words in each category is controlled, as Bachman (1985) suggests.

The result of this study suggests that morpheme cloze by acceptable scoring is a reliable instrument to assess the reading development and proficiency of learners of JFL. It reflects the essential aspects of the theory that defines reading as an integra-

tion of the knowledge of various linguistic systems and socio-cultural knowledge. In other words, morpheme cloze has construct validity.

Cloze tests in general eliminate the disadvantage of traditional tests, which consist of reading passages followed by comprehension questions. The traditional reading tests are criticized by Bensaussan and Ramraz (1984) due to the unfavorable text-item ratio. Traditional reading tests require students to read many lines of the passage in order to answer relatively few questions. The result of this study suggests that the utilization of the morpheme cloze tests in teaching Japanese as a foreign language will make reading assessment more efficient.

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Appendix A

Examples of Independent and Dependent Morphemes

Independent morphemes

- nouns e.g., *gakusei* (student), *nihongo* (Japanese language)
- inflected part of adjectives e.g., *atsuku* (hot)
- inflected part of verbs e.g., *yomi*, *yoma*, *yonde* (read)
- particles e.g., *ga* (nominative), *o* (accusative), *yo* (sentence ending)
- auxiliaries
- aspectual markers e.g., *-iru* (progressive or result)
- modality e.g., *-rashí* (seems), *-yô* (appears to)

Dependent morphemes

- passive markers (attached to the stem of the verbs) e.g., *-reru*, *-rareru*
 - causative markers (attached to the stem of the verbs) e.g., *-seru*, *-saseru*
 - tense markers (attached to verbs, adjectives, and copulas) e.g., *yomimashi-ta* (past of the verb "read"), *yomima-su* (non-past)
 - negation markers (attached to verbs, adjectives, and copulas) e.g., *yomima-sen* (negation of the verb "read"), *atsukuarima-sen* (not hot)
-

Appendix B

Examples of the Morphemes of Four Categories

1. Within clause

- 1-a. Syntax: aspectual markers (*-iru*, *-hajimeru*, *-shimau*)
- 1-b. Lexis: nouns, inflected part of the adjectives and verbs

2. Across clauses but within a sentence
 - conjunctive particles (*ga, keredomo, ba*)
 - head noun of a relative clause (*hon o yonde-iru gakusei* “the student who is reading a book”)
 - co-referential nouns
 - reiteration across clauses
 - different nouns indicating the same person or object
 - pronouns (*kanojo* “she,” *kare* “he”)
 - referential determiner or deictic (*kono* “this”)
 - collocation
3. Across sentences, within text
 - referential determiner or deictic across sentence
 - conjunctions (*shikashi* “but,” *tokorode* “by the way”)
 - pronouns coreferent across sentences)
 - collocation across sentences
 - reiteration across sentences
 - textual discourse maker
4. Extra-textual
 - lexical item with little or no local clue, socio-cultural knowledge

Appendix C

Sample of Cloze Test: Phrase Version

私は、今 USC という大学で日本語を勉強しています。USC は、ロサンゼルスにある大学で、フットボールで有名な()。日本語は、去年の秋学期に始めましたから、もうそろそろ()になります。

日本語のクラスは、月曜日から金曜日まで毎日()あります。このクラスでは、毎日のようにしゅくだいが()、毎週金曜日には、テストがあります。漢字もどンドン()、かなり大変です。私は、毎日二時間ぐらい、しゅくだいを()、ラボに行ってテープを聞いたりしていますが、ときどき()じゅうぶんではないように思うこともあります。()日本語を専攻にするつもりですから、日本語では、A を()と思っています。

USC で日本語を二年ぐらい勉強してから、日本へ()、日本の大学で一年ぐらい勉強してくるつもりです。()生活は、とても楽しいそうです。日本へ行って()人は、「日本人は、とても親切で、日本の生活は()楽しかった。」と、言っています。

日本語を聞くことと、()ことは大体出来るようになりましたが、日本へ()勉強するためには、もっと日本語が上手にならなければ()思います。今の私の日本語のレベルでは、大学の講義についていけないと思います。それから、日本語の本を()、日本語でレポートを書いたりするためには、もっと()覚えなければなりません。

日本語をマスターして、大学を卒業したら、()使える仕事を探したいと思います。たとえば、日本にあるアメリカの会社とか、アメリカにある日本の会社とかに()いいなど

おも
思います。そして、^{しやうらい}将来、^{にほん}日本と^{あめりか}アメリカの()の^{ぶんか}文化がわかる^{こくさいじん}国際人になりたいと思っ
ています。

Appendix D

Sample of Cloze Test: Morpheme Version

^{わたくし}私は、^{いま}今 USC という^{だいがく}大学で^{にほんご}日本語を^{べんきやう}勉強しています。USC は、^{ロサンジェルス}ロサンジェルスにある
^{だいがく}大学()、^{ふつボール}フットボールで有名な大学です。()は、^{きよねん}去年の^{あきがつき}秋学期に始めました()、
もうそろそろ^{いちねん}一年になります。^{にほんご}日本語()クラスは、^{げつようび}月曜日から^{きんようび}金曜日まで^{まいにち}毎日一時間あ
ります。このクラスでは、()のよう^ににしてくださいがあります()、^{まいしゆうきんようび}毎週金曜日には、
テストが()。^{かんじ}漢字も^{とんとん}どンドン^で出て来て、かなり()です。^{わたくし}私は、^{まいにち}毎日二時間ぐらい、
()をしたり、^{ラボ}ラボに行って()を^き聞いたりしていますが、()^{これ}でも^{じゆうぶん}じゆうぶん
では()^{よう}ように^{おも}思うこともあります。()は、^{にほんご}日本語を^{せんこう}専攻にする()ですから、^に日
本語では、A ()^とりたいと思っ^てています。

USC ()^に日本語を^{にねん}二年ぐらい^{べんきやう}勉強してから、()^いへ行って、^{にほん}日本の^{だいがく}大学で()^ぐぐ
^{べんきやう}ら勉強してくるつもりです。^{にほん}日本()^{せいかつ}生活は、とても^{たの}楽しいそうです。()^いへ行って
^{かえ}帰って来た人は、

「()は、とても^{しんせつ}親切で、^{にほん}日本の()はとても^{たの}楽しかった。」と、
^い言っています。

(以下省略)

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