

# Fluency and Accuracy in the Spoken English of Japanese High School Learners

**Kouichi Ano**  
(Waseda University)

To investigate the relation of fluency and accuracy in the spoken English of high school learners, spoken data of fifty-eight subjects were analyzed. After all the spoken samples were recorded and transcribed, specific tags were inserted in the texts. Firstly, five factors: total number of words, frequency of silent pauses, repetition, repair, and mean length of utterances (MLU) were integrated using principle component analysis, and the scores of fluency for each subject were determined. Next, the frequency of grammatical errors was counted to determine the accuracy of each subject. Grammatical errors were classified into twenty-two categories and most of them were local errors. Finally, the correlation of fluency and accuracy was calculated and the results showed that they were not statistically significant.

## **1. Introduction**

Since the revised Course of Study for Lower Secondary School, the main objective of which is to develop students' communication ability, went into effect in 1994, Japanese English education has changed from grammar focused teaching to communicative language teaching. Though more and more fluent speakers are observed in Japanese senior high school English classes, less accurate students in terms of grammar usage can also be seen. One of the main reasons for this is that too much emphasis has been put on oral communication skills in various kinds of communicative activities in the classrooms and English teachers force their students to speak English without paying enough attention to grammatical accuracy (Takashima 2000). English grammar classes, which were thought to be one of the most important classes in the older Course of Studies, are not taught in recent curriculums. As a result, the fact is that while students' ability in terms of fluency has been improved, they often cannot communicate appropriately in English due to a lack of grammatical knowledge.

Under this situation, there are heated debates among English teachers at Japanese high schools: which is more important, communication or grammar? Is it possible to find an answer to this question? Since appropriate communication can be carried out with correct grammar, grammatical knowledge is a necessity for appropriate communication. The problem is whether learners can make good use of grammatical knowledge while communicating in the target language. Imai (1998) points out the fact that instruction about language use is not enough in terms of communication in English education in Japan. That is, even though learners succeed in gaining

knowledge about English usage, they cannot use it effectively in communicating in the target language.

In the recent SLA studies, methodologies of teaching grammar have been discussed. In Doughty and Williams (1998) they wrote “The aim of focus-on-form studies is to determine how learner approximation to the target can be improved through instruction that draws attention to form but is not isolated from communication.” Swain (1998) said “Teaching grammar lessons out of context, as paradigms to be rehearsed and memorized, is also insufficient,” while Beretta (1989) insists that grammar can be acquired while the learners’ attention is on meaning. Therefore the direction of English education in Japan, which aims to improve learners’ communication ability, is in the right direction but the role of teachers drawing their learners’ attention to some forms while engaging in communicative activities should be considered.

The overall objective of The Course of Study (2003) is “to develop students’ practical communication abilities such as understanding information and the speaker’s or writer’s intentions, and expressing their own ideas....” In order to accomplish this objective, the investigation of learners’ English ability is a vital factor. Specifically, the balance of fluency and accuracy should be taken into account. There are three aims of this study: to analyze the spoken English of high school learners, to investigate the relation between fluency and accuracy in their speeches, and to reconsider the teaching methods to foster the learners’ communication ability.

## **2. Theoretical Background**

### **2.1 Fluency and Accuracy of Foreign Language Learners**

Language immersion programs, in which all or part of subjects in school is taught in the target language, are recognized as one of the most successful language methodologies. However, a weak point in terms of accuracy has been reported in that immersion students become quite fluent but their spoken language is often far from accurate (Swain and Lapkin 1995, Hammerly 1987, 1991). Additionally, the two aspects, fluency and accuracy, are important criteria in foreign language proficiency tests such as ACTFL or SST. It shows that language teachers should foster their learners’ ability while being mindful of fluency and accuracy.

### **2.2 The Definition of Fluency**

In order to decide the fluency level of a learner’s English, the following five factors were analyzed in the research. The factors were decided based on the criteria for fluency in some standardized tests such as ACTFL (Breiner-Sanders et al. 2000) and SST, and recommendations from a previous research (Nakano et al. 2001).

- (1) The total number of words spoken in a fixed time.
- (2) The number of silent pauses for thinking.
- (3) The number of repetition of words, phrases or clauses.

- (4) The number of repair or reformulation for correction.
- (5) Mean length of utterance (MLU).

### **2.3 The Definition of Accuracy**

Though the criteria for defining accuracy in most standardized tests include factors such as grammar, vocabulary, pronunciation, sociolinguistic competence or pragmatic competence, grammatical errors were the main factors in deciding the level of accuracy for this research. Considering the fact that grammatical instruction has been the mainstream in English education in Japan, it is important to investigate the learners' accuracy under the instruction of communication based lessons. The word usage and sentence structure were considered as grammatical understanding, but pronunciation was excluded because it is quite difficult to sort out correct pronunciation due to the variety of accents. The frequency and kinds of errors were also investigated to know the learners' situation.

## **3. Experiment**

### **3.1 Purposes**

There are two main purposes for this research. Firstly, after defining numerical values in fluency, investigation of the correlation between fluency and grammatical accuracy in the speech samples of high school learners is carried out. The second purpose is to find the frequency and kinds of errors in terms of accuracy.

### **3.2 Hypotheses**

Besides the above purposes, the following two points are the strong interests in the experiment. Since the evaluation of fluency has been considered to be difficult, the first concern was to check whether each variable for fluency has a correlation with any other variable to show fluency using numerical values. The other was to examine whether the observation that fluent learners are not always accurate was true or not. In order to examine these points, two hypotheses were set using null hypothesis.

#### **Hypothesis 1**

The total number of words, the number of silent pauses, the number of repetition, the number of repair and mean length of utterance (MLU) have a negative correlation with each other.

#### **Hypothesis 2**

Fluency and accuracy in the speech samples of high school learners has a positive correlation.

### **3.3 Subjects**

The subjects in the experiment are fifty eight Japanese senior high school learners of English. All of them are in the eleventh grade and taking an Oral Communication A class which is instructed entirely in English and designed to improve their speaking

ability. Ten of them are male and forty-eight of them are female.

### **3.4 Procedure**

The subjects were divided into two groups: Group A and Group B. The experiment for Group A was carried out before winter vacation and Group B after winter vacation in order to avoid the use of only past tense or future tense in their speech samples. The recording was conducted in a language laboratory so that the subjects could record their voice individually at the same time sitting at their individual booths.

The subjects were told to answer the following questions in two minutes:

Group A

What are you going to do during your winter vacation? / What do you want to do during your winter vacation?

Group B

How did you spend your winter vacation? / What did you do during your winter vacation?

They were given one minute to think before starting to answer the questions in order not to waste some time thinking about content in time for speaking. Their speech samples were tape recorded.

### **3.5 Analysis**

#### **3.5.1 Transcription of Spoken Data**

All the recorded speech samples were transcribed and the following tags were inserted in them.

( ) silent pause

Example. I want to ( ) buy ( ) shoes and clothes

<r> repetition

Example. <r>I have I have a lot of homework

<R> repair

Example. <R> I enjoy I enjoyed winter vacation

< J > Japanese words

< L > laughter

< C > cough

#### **3.5.2 Numerical Values of Fluency**

To define the level of fluency for each subject, the following five variables were integrated into one value using principal component analysis.

- (1) Total number of words in 2 minutes
- (2) Frequency of silent pauses
- (3) Frequency of repetition
- (4) Frequency of repair

(5) Mean length of utterance (MLU)

### **3.5.3 Measurement of Accuracy**

All the transcriptions of the spoken data were checked by three native speakers of English; a male British, a male American, and a female Australian. All of them were teaching English at senior high schools in Japan when the experiment was conducted. As a first step, all the grammatical errors found by at least one native speaker were investigated. Among them, errors taught as misuses at school and errors checked by more than two native speakers were considered to be inaccurate and used as variables to define accuracy. In order to show numerical values of accuracy, the frequency of errors was calculated using the following formula.

Numerical values of accuracy = total number of words / (the number of errors+1)  
The larger the number is, the greater the sample's accuracy is.

## **4. Results**

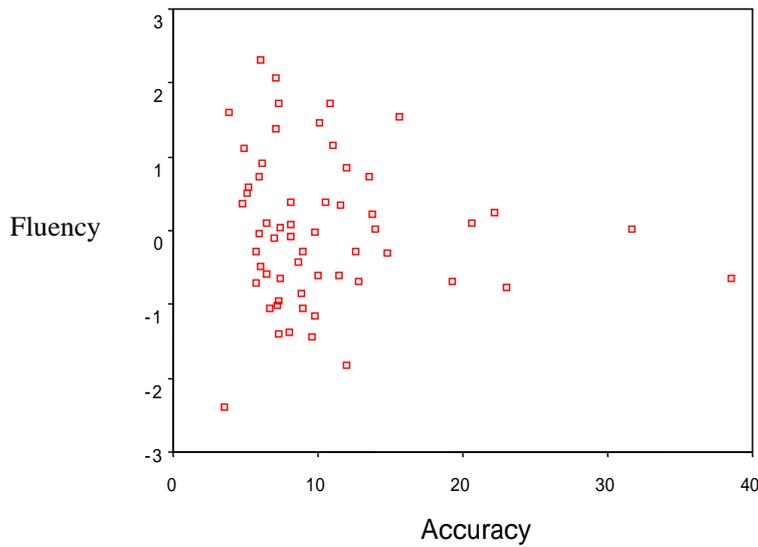
### **4.1 Hypothesis 1**

Firstly, Hypothesis 1 was examined. The Pearson Correlation was used to measure the correlations among five variables: total number of words, the number of silent pauses, the number of repetitions, the number of repairs, and mean length of utterances (MLU). Since all the relations among each variable have positive correlations, Hypothesis 1 was rejected and it was concluded that the five variables can be used for measuring fluency.

Among these relations, three significant correlations were found. Two of them were correlations between the total number of words and the number of repetitions, and between the total number of words and the number of repairs. These results explain that repetitions and repairs can be the cause of a large number of words being used. The other significant correlation is between the number of repetitions and the number of repairs, so it can be said that learners who repeat words, phrases, or clauses often repair their speech patterns.

### **4.2 Hypothesis 2**

To examine Hypothesis 2, the correlation between fluency and accuracy was measured. Figure 1 shows the relationship between fluency and accuracy of each subject.



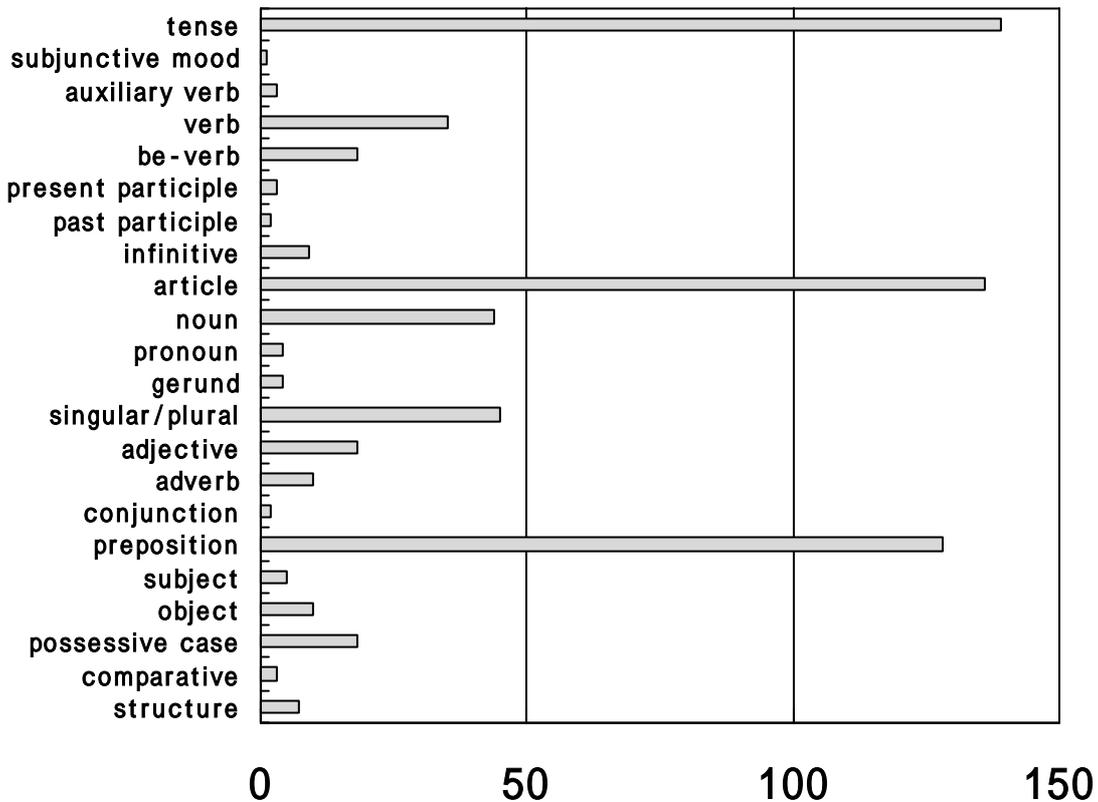
**Figure 1: Scattergram of Fluency and Accuracy**

In this chart, subjects with high level of both fluency and accuracy cannot be found. The Pearson Correlation was used to measure the relationship between fluency and accuracy, and the correlation of them was not significant ( $r = -.088$ ). It indicates that there is no relationship between fluency and accuracy, and Hypothesis 2 was rejected.

#### **4.3 Kinds of Errors**

The total number of errors which were found in the spoken data was 644 and they were classified into 22 categories: tense, subjunctive mood, auxiliary verb, verb, be-verb, present participle, past participle, infinitive, article, noun, pronoun, gerund, singular/plural, adjective, adverb, conjunction, preposition, subject, object, possessive case, comparative, and structure. Table 1 shows the frequency of each error.

**Table 1: Frequency of Grammatical Errors**



Three kinds of grammatical errors: tense, article, and preposition were the main mistakes that the subjects made in their speeches. The most frequent error concerning tense is the confusion between past and future tenses with present tenses. Present tenses were used for the past or future, though adverbial phrases showing time were used correctly. That means that the learners could not distinguish the changes in tense of verbs or auxiliary verbs even though they understood the time difference. The learners also could not monitor function words such as articles and prepositions. Unnecessary prepositions were put into sentences mainly because of set phrases or chunks that the learners had acquired. For example, a subject said “go to shopping” instead of “go shopping” because she acquired the phrase “go to” as a chunk. Some subjects repeated errors of tense, articles, and prepositions many times in their speeches. Nouns errors were also found in the data, because the topic used in the research influenced them. The subjects were confused with the usages of cardinal numbers and ordinal numbers when they mentioned dates.

### **5. Educational Implications**

Through the research regarding the relationship between fluency and accuracy, possibilities to improve the English abilities of Japanese learners were found. The first finding is that learners with many utterances are not always fluent. Though the

speakers who speak a great deal are thought to be fluent, repetition and repair, which cause dysfluency, are the factors which produce more speeches than necessary. In order to decrease repetition and repair, instruction is also needed to control the pace of speech in order to increase the amount of substantial content given in the same amount of time.

Secondly, repair can be a factor in promoting accuracy while speaking in the target language. From the data analyzed in this research, most of the subjects repaired their errors correctly in their speeches, which is a good method to reconfirm their grammatical knowledge. By forcing learners to speak the target language, it can be possible to promote both fluency and accuracy in the classroom.

Thirdly, since the learners' attention was on content while speaking English, there were more errors of function words than those of content words, and more local errors than global errors. These errors do not influence the meanings of speeches directly, so errors might be acquired by repeating the same mistakes without noticing them. To avoid this unexpected acquisition, form-focused instructions should be set in classroom activities, and language teachers should develop teaching methods to focus the learners' attention on grammatical points in order to foster communication ability.

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