

博士学位申請論文【最終提出版】

A Corpus-Based Evidential Approach to
English Education for Japanese Learners:
Examples of Written Grammar and
Spoken Communication

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Chapter 1. Introduction

English language education has undergone significant changes in recent years. One of the principal axes of this trend is the emergence of the evidence-based approach (Kilickaya, 2004; Mizumoto & Chujo, 2015). With the Internet revolution and the development of computer technology, English language education has experienced vigorous growth since the 2000s.

The evidence-based approach can be categorized into different types; the use of authentic material is one example. Authentic materials in an English as a foreign language (EFL) classroom mean using materials (e.g., newspapers, maps, advertisements, etc.) that are actually used in countries and regions where English is used as the first or an official language. This approach emphasizes the cultural background and practical usage of the language (Peacock, 1997). This trend has been actively discussed since the 2000s.

Furthermore, the compilation of English dictionaries for EFL learners based on a language usage database has spread widely from the UK since it started in the 1980s. For example, Cambridge Grammar of English is an expansive guide for both written and spoken English based on data from Cambridge International Corpus (Carter & McCarthy, 2006). In Japan, the first English-Japanese dictionary that utilizes real evidence from a database appeared in 2003 (Inoue & Akano, 2003). Subsequently, various successful dictionaries have been introduced. This increased

focus on evidence has been related to an increased recognition of the need for communication skills.

In terms of the history of English education around the world, Europe in the mid-nineteenth century favored the grammar translation approach. This appeared as a method of English education used with groups of learners in school (Howatt & Widdowson, 2004). In typical grammar translation teaching method, each lesson has a target grammatical rule and a set of vocabulary and example sentences related to that rule. During that era, the example sentences were models that included the target grammar rules; most of them were collected from verses of poetry or literary works or self-produced simple examples by native speakers of English (NSEs). Learners used these example sentences for translating from/to their mother tongues. Usually, drilling exercises were prepared for the entrenchment of grammar rules.

With the development of industrial technology and globalization, the mobility of human resources became more flexible and fluid, and more focus was placed on verbal communication skills in English (Vertovec, 2009). Problems of the reading-centered grammar translation approach were indicated. First, the grammar translation approach may disregard meaning and context, which makes it unsuitable for teaching communication skills in English (Lee & VanPattern, 1995). A greater focus on four skills, including speaking, was needed. In addition to meaning and

context, another problematic area was the disregard of the function of language in communication. Consequently, new approaches that carefully observed language phenomena based on authentic examples and integrated the context of communication were gradually formed. For example, Halliday introduced systemic functional grammar, pointing out the importance of pragmatic functions of language (cf Halliday, 2004). The increased attention to communication and context led to the advent of texts and curricula that use authentic material, as mentioned above (Richards & Rodgers, 2001).

With the shift of attention from prescribed rules to authentic usages, corpora began to play an important part in the analysis of evidence-based language phenomena. Essentially, a corpus can be defined as a database containing languages and their surrounding information integrated with purpose and criteria (Sinclair, 2005; Adolphs & Carter, 2013; Knight, 2011). When language is analyzed using a corpus, the framework is called "corpus linguistics." However, although corpus linguistics includes the term "linguistics," it often refers to the approach of language research that uses a language database rather than a set of systematic theories. Due to its ambiguous nature, it is difficult to identify the earliest corpus in history. Nevertheless, the study by Palmer (1938) fostered the database-based approach in vocabulary research. The compilation of authentic corpora started in Europe in the 1950s; with the development of technology in the 1970s, computerization was

initiated (McEnery, Xiao & Tono, 2006).

Regarding the application of corpora to English education, after the compilation of dictionaries, the technology to accumulate and retrieve language data became advanced, and various tools and methods were developed. Data-driven learning (DDL) is a popular approach that encourages learners to “discover” the usage of foreign language (Johns, 1991). In DDL, language data are digitized in corpora with a user interface that enables learners to access and search the data. This leads learners to look at authentic examples and notice the characteristics of the vocabulary and grammar by themselves rather than input grammar rules as decided standards. This type of awareness-raising exercise has been widely used.

In addition to the direct pedagogic approach such as DDL, approaches to analyze the communication functions of grammatical structure and to enhance the verification of language theories have been developed with the use of abundant corpus data. This can be called the corpus (data)-based approach in contrast to the data-driven approach, in a sense that researchers and/or teachers use data for better explanations on language phenomena (McEnery, Xiao & Tono, 2006).

One example of applying corpora to language theory is to combine the data analysis of a corpus within the framework of linguistic theories. An example can be shown in the use of corpora with cognitive linguistics. Cognitive linguistics is a descriptive linguistics that appeared in the 1980s, and the theoretical framework

itself is founded on an evidence-based approach, as it suggests the importance of the usage-based model (Langacker, 1982; 1990; 2008). Further combining evidence from corpora, the analysis of language phenomena and its application to English teaching can be accelerated. In particular, this practice introduced the evidence-based “principles” and the schematic top-down learning of grammar. These ideas have gradually been changing English education in Japan, where the reading-centered grammar translation approach with a rote-learning method has been emphasized.

The corpora mentioned above were databases of authentic language usage by NSEs; however, these are not the only evidences that can be useful for Japanese EFL learners. With advanced technology, collecting and analyzing learners’ language usage became feasible; this led to the compilation of learner corpora (Ishikawa, 2011; Tono, 2003). Learner corpora provide insightful data, such as typical errors by learners with different levels and the influence of their first language. These data have greatly benefited curriculum and material development in English education.

Furthermore, a new type of corpora has the possibility of leading innovational advance in English education in Japan, namely, multimodal corpora. From the beginning of corpus linguistics to the 1990s, major corpora were text-centric, such as written language (e.g. Brown Corpus and Lancaster-Oslo-Bergen Corpus). This was mainly due to technical constraints such as limited data storage

and insufficient data processing speed. However, the development of technology now allows researchers to integrate multimodal data in addition to a text document, such as a sound file and movie data, without difficulties. For instance, multimodal corpora, including the Cambridge and Nottingham Corpus of Discourse in English (CANCODE) and British Academic Spoken English corpus, have arrived one after the other (Adolphs & Carter, 2013).

Because Japan has an EFL environment, it is difficult to connect communicative education inside the classroom with its use outside of school¹. By applying multimodal corpora, the quality of classroom input related to communication, including oral interaction, can be improved; if a teaching material using multimodal corpus data is developed, the benefits can be remarkable. In fact, English as a second language (ESL)/EFL textbooks that are based on multimodal corpora and that focus on communicative functions have already been published in Europe (McCarthy, McCarten, & Sandiford, 2005). However, such benefits have yet to reach Japanese classrooms.

As mentioned previously, from the viewpoint of the evidence-based approach, this approach has significantly influenced English language education in recent years. The two main areas of its benefit include grammar education and practical communication. Based on the above discussion, this study examines how a corpus-based English learning pedagogy can improve Japanese learners'

communication skills. English education in Japan has been gradually changing its direction from a grammar-centered approach to a communicative approach, and the need for practical communication skills is called for in a society of increasing globalization.

This thesis will focus on language authenticity and multimodality in English classrooms which have been less focused in Japan, and examine its influence on English education while conducting quantitative analysis. Especially, by using three different types of English data from a written corpus, a spoken corpus and a multimodal corpus, how these data can provide useful implications to English language teaching and learning in schools in Japan will be discussed.

This research first conducts needs analysis with Japanese EFL learners in order to narrow down the target of main analysis. I will discuss the needs analysis method and its results in Chapter 2, after reviewing previous studies. Based on the results of needs analysis, analysis and discussion will be formed through Chapters 3 and 4. Finally, research summary and discussion of future prospects will follow in Chapter 5.

Chapter 2. Background

2.1. Corpora and English Education

In this thesis, evidences from authentic language usage will be utilized for establishing principals of English usage and extracting guideposts for teaching English communication to Japanese EFL learners. This chapter reviews previous studies of corpus linguistics. It also conducts a needs analysis of English usage with Japanese EFL learners to establish the basis of our main analysis.

2.1.1. An Overview of Corpus Linguistics

This section examines a brief overview of corpus linguistics and its application in the field of English Language Teaching (hence:ELT) to establish a theoretical grounding of the present study. In general, empirical research of the English language by making use of a language database is not a new approach in linguistics as previously noted. In fact, some of the earliest studies that made use of collections of language even data date back to the 1700s (Kennedy, 1998; Biber, Conrad & Reppen, 1998). For example, Johnson (1755) and Cruden (1736, cited in Kennedy, 1998) compiled paper databases of English language from the Bible and other previously written materials to create a monumental concordance and dictionary. At the time, the size of databases was inevitably small because of the fact that they were recorded manually. Thus, corpus linguistics had come under a

serious challenge by being criticized as “skewed” by Noam Chomsky, meaning that the samples were not well-balanced and they did not list all examples used by the speakers of English (Chomsky, 1962; McEnery & Wilson, 2001; McEnery, Xiao & Tono, 2006).

Other than the handwritten collections of language data during the early 1900s, the first modern day corpus is believed to have appeared in the 1960s, which was so-called the Brown Corpus compiled at Brown University (Francis & Kucera, 1982). Since computer technology and the internet have rapidly developed, these modern tools enabled researchers to collect, store and search large language data more easily than in the first half of the 1900s.

As computer technology progressed more and more, and with the gradually increased attention to language authenticity, the popularity of corpus linguistics started rising rapidly in the 1980s. For instance, the total word count for mega corpora such as the British National Corpus (BNC) and the Collins Wordbanks is more than 100 million words nowadays. Reflecting on these circumstances, McEnery and Wilson (2001:1) refers to the recent decades as going through a “renaissance” of corpus linguistics.

2.1.2. Applications of Corpora and Language Pedagogy

Not only general corpora such as BNC and the Collins Wordbanks but also

different types of corpus have been created for various purposes by researchers in many disciplines. For example, other types of corpora include parallel corpora, pedagogic corpora and learner corpora. Each type of corpus has provided data for users such as forensic investigators, sociologists, and linguists (Bell, 1984; 1991; Kennedy, 1998; Leech, 1992; McEnery and Wilson, 2001; Hunston, 2002; McEnery, Xiao and Tono, 2006; O’Keeffe and McCarthy, 2010; Murphy, 2010).

Among various applications, one of the most common purposes of using corpus nowadays is to investigate data for pedagogic purposes. As the communicative movement in the field of ELT has become gradually predominant since 1970s, the attention for English language used by NSEs in their real lives has been increasing accordingly compared to the previous period when the teaching focus was more on sentence structures (Littlewood, 1981; Nunan, 1989; Richards and Rodgers, 2001). In this major paradigm shift in language teaching approach, the roll of corpora that are able to provide authentic, real-world representations of language has become significant in the field of ELT, and it was also the case in the Japanese classroom as well. We will return to this issue later in this chapter.

Even before the advent of the communicative language teaching (CLT), characteristics of English language such as vocabulary and grammar have been targets of pedagogic corpus inquiries from early years. Fries and Traver (1940) is an example of those studies. They created vocabulary lists based on corpus data for

second language teaching, to make the process of learning vocabulary more efficient in terms of showing important basic words and their collocations. Furthermore, in recent years, Collins COBUILD English Dictionary (Collins, 2001) and Cambridge Dictionary of American English (Landau, 1999) were written based on the enormous amount of data from the Bank of English and Cambridge International Corpus, both of them are large collections of everyday conversations and/or texts. These dictionaries are designed to order and list important meanings for each word based on its occurring patterns in corpus data, and collocations and example sentences that are based on authentic usages.

Not only dictionaries but also grammar reference books and textbooks have been written based on corpus data. To name a few from the field, Cambridge Grammar of English: A Comprehensive Guide to Spoken and Written English Grammar and Usage (Carter & McCarthy, 2006), Collins COBUILD English Grammar (Sinclair, 1990) and Touchstone course-book series (McCarthy et. al., 2005) were all written based on corpora data.

The Touchstone series stand out in the sense that they are in ready-to-use forms for ELT classrooms. The vocabulary and grammar patterns adopted in the textbook reflect frequencies in the Cambridge International Corpus. The corpus enabled writers to include unique features to the textbook series such as conversation strategies and vocabulary exercises based on frequency lists from

conversation data. As we can see from these examples, nowadays the presence of spoken language data has become more and more powerful in the language pedagogic field. This issue will be discussed more closely later in this chapter in relation to the purpose of the present research.

In addition to the dictionaries and reference books, another way to apply corpus in English classroom is to use a corpus directly in classroom, to enable students to access and explore the authentic data themselves and gradually become aware of characteristics of target structures as mentioned in the previous chapter. This type of methodology is generally referred to as DDL (data-driven learning) as previously mentioned in Chapter 1.

At the initial appearance of DDL, Johns (1991, 1994) and Tribble (1997) provided practical ideas and suggestions for this approach, such as how teachers can use DDL in the classroom context. For example, Tribble and Johns (1997) suggest activities in which teachers encourage students to compare their own writing with authentic texts regarding the usage of certain collocations, words and structures. They state that this kind of activity is effective for assisting students to notice the differences between their writing and works by NSEs. Many other researchers including Hunston and Francis (2000) and Hadley (2002) have also provided practical ideas to conduct DDL in classroom settings. In Fuyuno (2012), it was argued that DDL would also be an effective method to teach grammar to

Japanese learners.

The growing attention on DDL reflects the changing view of ELT principles in general. As CLT has become predominant in the field of ELT, researchers such as Swan (1985) and Ellis (1996) questioned a simplistic application of CLT, since the rapid growth of the approach caused problems such as too much weighting on fluency and neglect of accuracy in terms of grammar and/or vocabulary and the teaching of these issues. DDL has been expected to be a useful tool to solve these problems as it can assist learners and teachers to focus on forms, yet with authentic texts communicated by NSEs (cf. Scholfield, 1991).

DDL has also been introduced into Japanese classrooms (Mizumoto & Chujo, 2015; Suzuki et al., 2004), and its positive effects on Japanese EFL learners have been discussed. However, since DDL requires certain sets of computer environment, most installations have been done in tertiary-level education. For example, learners need a computer each, or at least 1 computer to a small group of 2-3 people, and the computers must have a concordance software or access to internet-browser-based concordances. In Japan, basis of grammar is taught in junior high school and senior high school education, so that DDL should ideally be implemented in these school curricula. Nevertheless, the environmental requirements and difficulties for securing enough time for DDL exercises seem to prevent the implementation. One practical solution can be that making textbooks and reference books with more

evidence-based, and implementing DDL-like awareness raising exercises as in Touchstone series by McCarthy et. al. (2005).

Turning back to the history of corpus linguistics, Scholfield (1991), Scott and Tribble (2006), Johns (1991) and Aston (2001) argue that the DDL approach is effective in establishing language awareness among teachers and learners, by guiding them to learn authentic uses of grammar and vocabulary with their contexts. This idea of "grammar in context" has formed a new movement among grammarians toward so-called *discourse grammar*.

In their examinations on the spoken language, Brazil, Sinclair and Carter (1995) and McCarthy (1998) noticed that situational contexts often serve to fill gaps in traditional grammar explanations, as some of the ambiguous choices between uses of grammatical items seemed to be attributed to the differences in contexts they were used. These findings include issues such as the choice of auxiliary verbs and tenses.

For example, McCarthy (1998) examined frequencies of *be to* future construction and *will* futures in CANCODE and data from British newspapers. According to his research, the *be to* futures showed extremely low frequency in informal conversations. In fact, he reports that the *be to* construction never occurs in one million words of CANCODE data. However, the construction turned out to be commonly used in the newspapers to introduce events in a context of present

relevance and project them into the future (McCarthy, 1998; 101).

This kind of context-bounded characteristic of grammar also accounts for a probabilistic nature of grammar, since some grammar items cannot be fully predicted, nor be shown as prescribed rules, unless contexts and intentions of the users are specified. This fact provides basis for our discussion in Chapter 3.

As mentioned, development of corpora initiated as hand-written collections of English writings, and later it evolved as large-scaled digital database. Mainly due to computer environmental restrictions such as data processing speed and storage size, even the digitized corpora were majorly text-based for decades. This type of corpora are generally called monomodal, because of the number of media for data annotation and analyses (cf. Knight, 2011; Tsuchiya, 2013; Adolphs & Carter, 2013). Gradually, as researchers started to notice the difference between natures of spoken and written languages, transcription methods for speech scripts remarkably evolved. Pragmatic discourse factors such as speech intonation, turn taking, nodding, and gestures have been analyzed both quantitatively and qualitatively (Carter & McCarthy, 1997; McCarthy, 1998; Evison, 2013).

In the growing attention towards discourse analysis, corpora that have multichannel inputs (e.g. sound data, video data, GPS data e.t.c.) started to be created. They are generally called multimodal corpora (Knight, 2011). Although there have already been various projects for compilation of multimodal corpora,

English education research based on multimodal data has not yet been fully practiced for Japanese EFL learners. Since multimodal corpora provide information for both verbal and non-verbal aspects of communication, analysis with the information will be fruitful for language learners, especially those in EFL environment where authentic communication is rare to observe. The present study shed lights on this issue; Chapter 4 provides further discussion.

2.2. Needs Analysis of Practical English Skills

We previously discussed the chronological overview of the application of corpora data in English education. As indicated, its application in Japan has been relatively small to date compared to Europe. The examples of applications have included dictionary compilation and DDL practices in universities, but these are insufficient. In fact, although decades have passed since the introduction of the communicative approach in Japan, the speaking skills of Japanese learners are still surprisingly weak. According to the published data of score results for the TOEFL Internet-based test, the average score of Japanese candidates in the speaking category is the worst in the world (ETS, 2008). This suggests that English education in Japanese schools is not functioning as expected in terms of communication skills.

One of the unique features of English education in Japan is that there is a strong washback effect from the standardized university entrance examination

(Fuyuno, Shimokawara, Chuang, & Lin, 2014). The university entrance examination in Japan has been mainly comprised of English reading and listening tests. Although the communicative approach has been adopted in school-level English education, in reality, teachers must predominantly focus on preparation for the examination.

Actually, the situation around the entrance examination is changing after an official government announcement of a major reform in the admission system. In the new admission system, a “university entrance candidate academic ability evaluation test (tentative name)” will be implemented. Consequently, an English speaking test will be introduced in the English examination, and more universities will adopt interviews and presentations in their individual examinations. However, there may be a gap between the present school education and Japanese learners’ actual needs for English skills.

To date, there have been few large-scale needs analyses of Japanese EFL learners. One rare previous study is that by Koike, Terauchi, Takada, and Matsui (2010); however, some aspects of their data have become too outdated to be applicable to the current situation. Considering this background, this study conducts a needs analysis to discover the real skills needed by Japanese people to work effectively in a globalized society.

2.2.1. Background

Since the last decade, the socioeconomic focus in Japan has significantly shifted toward globalization. As a result of this change and to cope with increased international economic competition, the demand for practical English language skills has been increasing rapidly. This has resulted in the launch of the communicative approach in Japanese schools. However, few academic studies have investigated the details of English skills actually needed in society by people who receive education in Japan. Therefore, this section reveals the skills needed in the international environment by analyzing responses from Japanese businesspeople who have experience of working in a global context.

Previous studies that have focused on analyzing the needs of Japanese English learners include those by Iwata (2011), Tsuji (2008), Koike et al. (2010), and Hashimoto (2013a, 2013b). Especially, Koike et al. (2010) reported the results of their expansive needs analysis of English language skills needed by Japanese companies. Their survey questionnaire examined situations wherein Japanese businesspeople use English. The result of the study provided insightful information regarding English language needs in Japanese companies; however, most participants (approximately 80%) in their survey never experienced working abroad, and half of them had never even experienced short business trips abroad. Given that the scope of their study was mainly restricted to participants living inside Japan,

there is a need to expand the sample to include contributions from Japanese international businesspeople working abroad, which is an increasingly common situation nowadays. Furthermore, the survey by Koike et al. (2010) was performed in 2006; we can presume that the international business environment may have changed in the intervening years. In fact, the number of Japanese people living abroad has increased by approximately 21% in 2006–2014 (Ministry of Foreign Affairs of Japan, 2016).

Considering this background, this study analyzes and discusses the English language skills specifically needed in the international business environment. Using the needs analysis approach, the overarching aim is to elucidate factors to be improved in the English language curriculum for Japanese schools and apply the results of the main research in later chapters. To examine these points, we focus on the following research questions in the needs analysis:

RQ1. Are there gaps between the English language skills emphasized in the current Japanese curriculum and the skills needed in real society?

RQ2. Specifically, in what situations is English needed in the international environment?

2.2.2. Data

Data for the needs analysis were collected between July 2013 and April 2014

using a questionnaire survey. Participants comprised a sample of 75 Japanese business people who have work experience in foreign countries and who received elementary to tertiary education in Japan². While most responses were obtained by using an online questionnaire platform, in some countries, where the internet was unstable, the author provided a hardcopy of the questionnaire face-to-face³.

Table 2.1 lists the five questions in the closed-response (multiple-choice) questionnaire. The questions and answer options were established based on pilot interviews with two Japanese international business people. In addition, the questionnaire used in the study of Koike et al. (2010) was used as a reference. For the original Japanese version of the questions, please refer to Appendix 1. Samples of the answer choice options in English are shown in Appendix 2.

Table 2.1. Survey Questions

Item #	Questions
1	In which situations do you mainly use English? (please select all that apply)
2	In which situations do you want to improve your English skills? (please select all that apply)
3	What English language skills did you learn in Japan that you feel are useful for your work now? (please select all that apply)
4	What English language skills do you wish you had learned more in Japan? (please select all that apply)
5	What kinds of English language teaching practice do you think is needed in Japanese secondary and tertiary education? (please select all that apply)

2.2.3. Method

The responses were coded and digitized into a database format. To summarize the responses and consider these in relation with the two research questions, firstly the answer options were categorized into input skills (skills that are mainly related to reading and listening) and output skills (skills that are mainly related to writing and speaking). The raw data for each question were divided according to the two categories. The data were then analyzed by cross comparing answers for different questions. To evaluate the significance of differences, a Chi-square test was performed on the data when necessary.

2.2.4. Result and Discussion

Research Question 1

Regarding RQ1, the answers to each question were categorized as input skills or output skills. As previously noted, skills mainly related to reading and listening were categorized as input skills, and those mainly related to writing and speaking were categorized as output skills. For example, *reading business e-mails* was categorized as an input skill, whereas *writing reports* was categorized as an output skill. The detailed skills listed in the question sheet are shown in appendices 1 and 2. Given that the questions allowed participants to select multiple responses, this study analyzes the cumulative total number in each response category.

Regarding the question 1 'In which situations do you mainly use English?',

summarized results are shown in Table 2.2.

Table 2.2. Results for question 1

(Q1) In which situations do you mainly use English?	
Input skills	346
Output skills	371

From this result, it is confirmed that both input and output skills in English are needed in international business situations. However, as for question 2 'In which situations do you want to improve your English skills?' and question 5 'What kinds of English language teaching practice do you think is needed in Japanese secondary and tertiary education?', the ratio of input skills and output skills among the answers in two questions showed a difference (Table 2.3). The result of a chi-square test was confirmed to be significant ($p = 0.0086$).

Table 2.3. Results for questions 2 and 5

	(Q2) In which situations do you want to improve your English skills?	(Q5) What kinds of English language teaching practice do you think is needed in Japanese secondary and tertiary education?
Input skills	126	75
Output skills	245	229

From these results, it is seen that many participants feel a deficit in English output skills needed in their work environments. However, since the participants

were already working in foreign countries, their general English language competencies could be considered to be relatively high because of the fact that they had been selected for the transfer by their companies. In fact, on the cover sheet of the questionnaire, there was an optional question regarding the respondent's English language qualifications. From the responses to this optional question, the English proficiency levels of participants were generally at a high level (e.g. Average TOEIC score of 823.). Even so, the responses to question 2 demonstrate that the participants still feel the need to improve their English output skills.

By comparing the answers to question 3 'What English language skills did you learn in Japan that you feel are useful for your work now?' and question 5 'What kinds of English language teaching practice do you think is needed in Japanese secondary and tertiary education?', it was shown that the tendency of the answers was different between the two questions (Table 2.4). The difference was confirmed to be statistically significant by a Chi-square test ($p = .000$).

Table 2.4. Results for questions 3 and 5

	(Q3) What English language skills did you learn in Japan that you feel are useful for your work now?	(Q5) What kinds of English language teaching practice do you think is needed in Japanese secondary and tertiary education?
Input skills	112	75
Output skills	36	229

For question 3, the majority of respondents selected input skills, as expected, because the Japanese style of English language education focuses on vocabulary and grammar (input) skills (Fuyuno, 2014). On the other hand, as mentioned before, many participants answered question 5 that more output skills practice should be implemented in the Japanese curriculum.

To sum up, regarding RQ1 'Are there gaps between the English language skills focused in the current Japanese curriculum and skills that are needed in the real society?', the results indicate that English communication skills require greater focus in the Japanese curriculum. Within the context of language needs in the context of international business, both input and output skills are indicated as required; however, the participants' answers demonstrated a shortage of output skills training in English more than input skills training. This result may reflect the situation of Japanese schools that are under washback effects from university entrance examinations as mentioned in previous sections. Japanese official English education adopted communicative approach since 1980s, however the result of the present needs analysis shows the insufficiency of communicative skills.

Research Question 2

Regarding RQ2 'Specifically, in what situations is English used in international business environment?', the top-10 responses for question 1 'In which

situations do you mainly use English?’ were extracted. The top-10 responses are graphed in Figure 2.1.

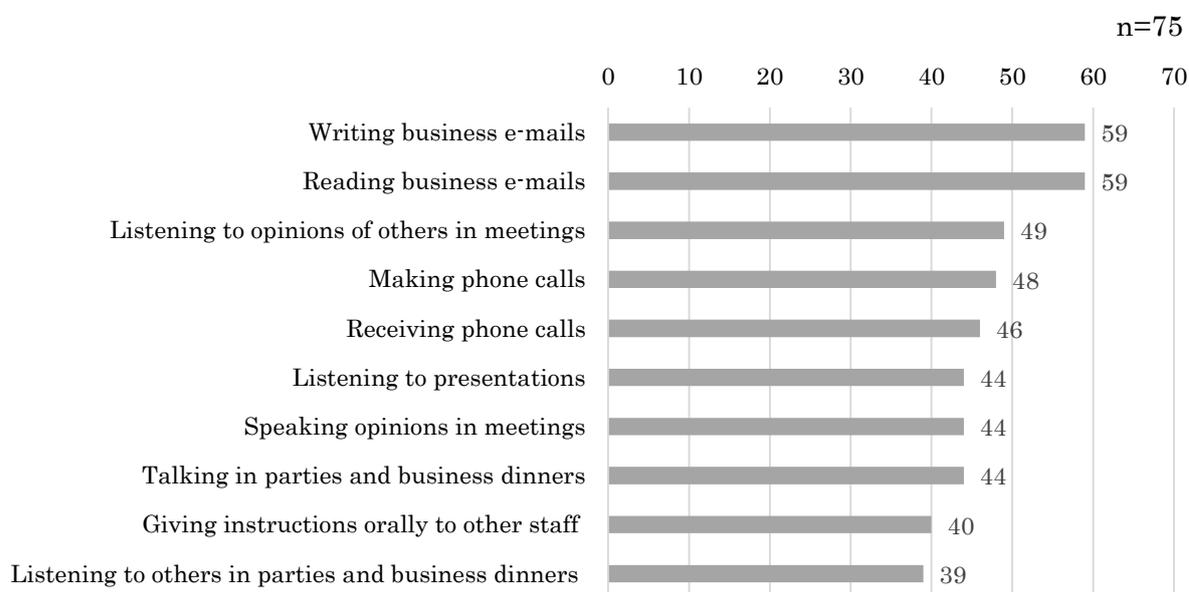


Figure 2.1. Top-10 responses for question 1

‘In which situations do you mainly use English?’

Furthermore, to investigate specific English language needs, the response to question 4 ‘What English language skills do you wish you had learned more in Japan?’ and question 5 ‘What kinds of English language teaching practice do you think is needed in Japanese secondary and tertiary education?’ are summarized in Figure 2.2 and 2.3 respectively. In both, top 10 responses were extracted; in the case of question 4 (Fig. 2.2), there were two items that had the same number of response as ranked tenth, so 11 items in total were extracted.

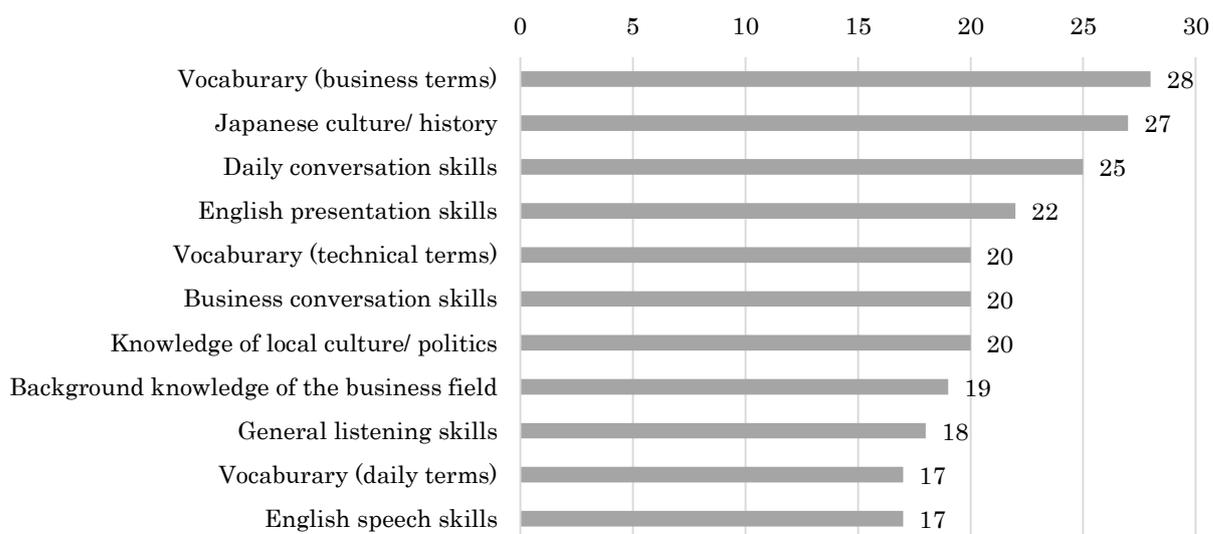


Figure 2.2. Top-11 responses for question 4

'What English language skills do you wish you had learned more in Japan?'

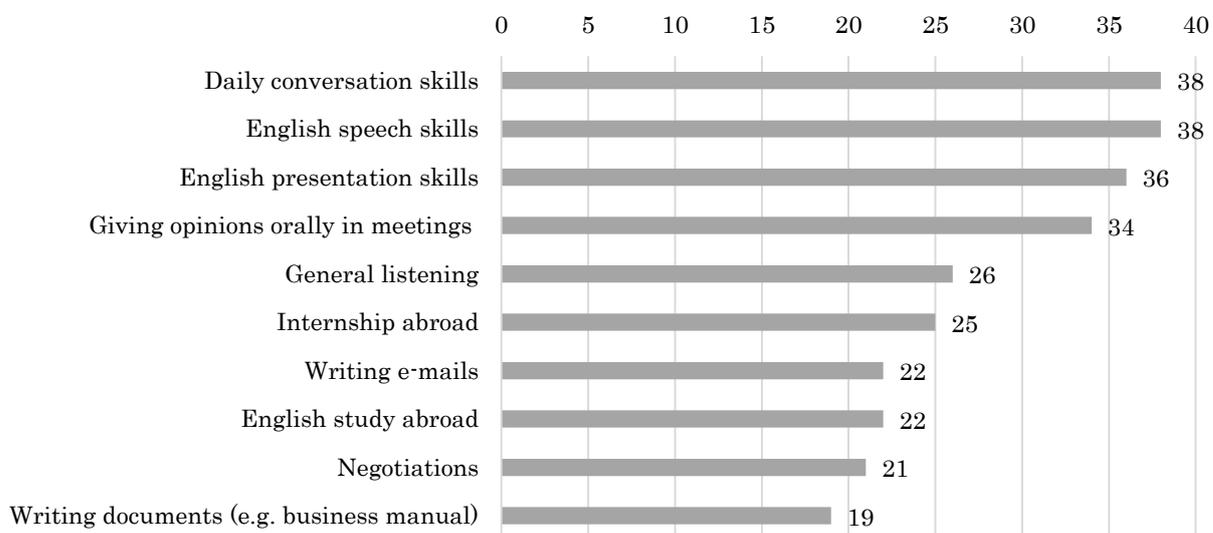


Figure 2.3. Top-10 responses for question 5

'What kinds of English language teaching practice do you think is needed in Japanese secondary and tertiary education?'

Among the above, common items appeared in the top responses to both questions, are shown in Table 2.5. They can be considered as reflecting improvement needs in Japanese English education.

Table 2.5. Common themes for curriculum improvement

Daily conversation skills
English speech skills
English presentation skills
General listening skills

From the themes listed in Table 2.5, it is noticeable that 'speaking' skills are of particular value. In fact, except for 'general listening', all common themes listed in Table 2.5 are related to speaking skills, especially public speaking. This provides valuable insight for the design and development of future material/syllabi for English language education in Japan.

Furthermore, the responses to the free comment section enhanced the result:

Comments on authenticity and context

- I think that education should be conducted not only at a desk but also more practically.
- It is better to have more opportunities to access authentic English.
- Grammar is taught richly at middle school and high school; I think that degree

is enough. However, vocabulary, especially those words related to daily life, does not roll off the tongue smoothly.

Comments on communication

- The first priority is correct grammar. By actually having conversations, it will lead to more useful English.
- More natural conversations and discussions should be conducted in classrooms, not activities such as singing English songs, looking at pictures, and saying names. The ability to say what you think in English is important.
- I think English education in Japan is never short as a period, and elements covered are sufficient, but there is still insufficient practical education for speaking or listening.
- I feel that speaking practice is especially insufficient in English education in Japan.
- I think that there is a lack of education for listening and speaking. In particular, speaking practice cannot be done easily in Japan, so I think that it is necessary to incorporate it in class.

Comments on public speaking

- I think that it will be more practical and useful if you hold a discussion with foreigners and make English presentations when you are still at school.
- Practice for deliberation such as speaking and giving presentations is insufficient.
- In English education in Japan, I feel that modules for communication are insufficient. Furthermore, in my opinion, English communication lectures focus on listening, and education for speaking is inadequate. I think that the process

of conveying what you think in English is important in the first place rather than caring too much about grammar.

- Education for how to prepare a presentation and how to present it is insufficient.
- Practice aspects such as thinking about a certain topic in greater depth, gathering your opinions with due consideration, and delivering them to others.

As we can observe from the results and comments, the key factors seemed to be authenticity, a realistic context, communication and public speaking. Furthermore, although the participants valued the current Japanese English curricula to some extent, education in speaking skills, public speaking skills, and communication skills was deemed to be insufficient.

2.3. The Purpose of This Thesis

In section 2.1, we observed that evidence-based materials and approaches such as DDL have benefited EFL education. Furthermore, needs analysis was conducted to examine learners' needs regarding Japanese English education. As indicated in the section 2.1. and results from 2.2, authentic language evidence and authentic materials are still not being utilized in Japanese classrooms, specifically at the secondary school level. There is a need for practicality and authenticity. In fact, we can observe an example of this issue in official textbooks in Japanese schools. Among the designated textbooks used in Japanese junior high schools, the

New Horizon series (Tokyo Shoseki), *Sunshine* series (Kairyudo), and *New Crown* series (Sanseido) are the top three in terms of adoption rate ranking according to the Ministry of Education, Culture, Sports, Science and Technology, Japan. In all these textbooks, the core contents are conversation sentences spoken by virtual characters. The setting of the situation is nonauthentic, and there are occasionally unnatural examples in the example sentences (e.g., STUDENT: *Ms. Baker, this is your pen.* MS. BAKER: *Oh, yes. That's my pen.* (New Horizon 1)).

In addition, as we saw in section 2.2., the needs analysis results showed needs for improvement in speaking education, particularly in aspects such as speech and presentation. English education in Japan has shifted to the communicative approach. However, there is still little practical opportunity for public speaking, and there is insufficient use of evidence to provide a proper model for Japanese English learners, especially regarding nonverbal factors.

Consequently, in this thesis, we set two main objectives to contribute to English education in Japan using an evidence-based approach based on the issues appeared from the needs analysis, namely authenticity and public speaking. The first is to bring materials such as text/reference books closer to actual usage by exploring and verifying a corpus-based approach. In particular, by focusing on spoken English data that were excluded from the scope of the conventional text-based corpus, we obtain new knowledge regarding authentic usages that are close

to the actual context.

In order to achieve the first objective, the thesis first compares authentic English usage and usage of Japanese learners of English to examine influence by current school education. Among various grammar items taught in Japanese English curricula, this research focuses on passive sentences, which form one of the prioritized compulsory items introduced in junior high school.

The passive sentence structure is generally regarded as an essential item of grammar in English teaching and is necessary for both written and spoken communication (Umesaki, 2015). However, the structure has also been highlighted as one of the items that Japanese students find difficult to learn (Kawase, 2013; Mouri, 2011). A survey on Japanese junior high school students by Mouri (2011) indicated that passive construction was one of the most basic level constructions that novice English learners found difficult. By focusing on passive construction, this study contributes to EFL education for Japanese students by making this syntax more understandable and practically useful for communication. Specifically, this study targets passive constructions containing psychological verbs. This type of construction has often been taught as rote-learning in Japanese classrooms; however, by applying an evidence-based approach, this study discusses more functional and communicational aspects of the construction.

The second objective is to provide an analysis that extracts useful

information for speech education through evidence from multimodal corpus data, a method that has not yet been fully adopted in Japan. There is a need to improve public speech education, such as practicing speech and presentation, which was clarified by the needs analysis. To achieve this, this study acquires new insights for Japanese English learners through multimodal corpus data for public speaking. By using multimodal data, physical and objective indexes for effective performance can be obtained. The analysis includes pause insertion patterns and eye contact movements, which have previously been considered to be difficult to teach.

Based on the above discussion, the research themes in following sections are as follows:

Chapter 3. Spoken English and Grammar:

- What are the characteristics and problems of English education in Japanese schools with regard to passive construction, which is one of the most important items to be learned in basic English? How do the effects of such problems appear in the English used by Japanese learners?
- What are the characteristics of actual usages by NSEs? Are there any differences between written data and spoken data?

Chapter 4. Multimodal Evidence for English Public Speaking:

- What are the characteristics of effective public speech performance,

especially regarding pauses, the relation between delivered contents and pauses, and eye contact?

- How can the results of education in the above areas be useful for Japanese EFL learners?

Chapter 3. Spoken English and Grammar

3.1. Background

As mentioned in the previous chapter, grammar translation approach has been dominant in the history of English education in junior high schools in Japan. Although this method has shifted to a communicative approach, it is still not fully based on evidence such as real context and practical examples. This section first confirms a common teaching method in Japanese English classrooms, focusing on passives with psychological verbs (psychological passives, hence: psy-passives); we then clarify how its effect appears in the English used by Japanese learners.

Furthermore, we obtain new evidence on the actual usage of psy-passives by using spoken language data, which is not yet expected to be reflected in Japanese English education. The use of both the written and spoken language data is expected to facilitate teaching English that emphasizes communication.

The next section first reviews the current teaching method of psy-passives in Japanese schools and clarifies the problems of this method by comparing usage data between NSEs and Japanese EFL learners. In general Japanese English education, psy-passives are usually taught in sets with corresponding Japanese translations, such as "*be surprised at* = ～に驚く," in the style of "*be verb* + past participle + specific preposition." Because this is a passive sentence, the co-occurrence of various other prepositions such as "*by*" should be a natural

phenomenon. However, in current teaching methods, this flexibility is not adequately taught. This section compares the frequencies of prepositions co-occurring in psy-passives using NSEs data from BNC and Japanese EFL learners' corpus data. Correspondence analysis and a chi-square test are used to compare the differences.

In Section 3.3., a focus will be given on spoken English data which has not been adopted sufficiently in Japanese education. Here, a comparison of usage of psy-passives between two subcorpora from BNC.

3.2. Comparison of English Usage Data between NSEs and Japanese EFL Learners

3.2.1. Introduction

The aim of the following 5 sections is to compare the usage of English passives with psychological verbs between NSEs and Japanese EFL learners in order to evaluate effects of the rote-learning approach in Japan and to consider these in relation with the developments of more effective English teaching materials in Japan. This chapter will use the term psy-passive to refer to an English construction that consists of "subject + *be*-verb + past participle which expresses an emotion or a psychological reaction", for example: *John was surprised (at/by the fact).*

Although the official English education in Japan has gradually shifted toward

more communicative approach, psy-passives have been taught in a confusing manner of sentence-based approach, majorly with rote-learning materials as previously mentioned (more discussion of this issue will be given in the next section). Therefore, the purpose of the present study is to compare the usage of psy-passives, especially with their co-occurring prepositions, by NSEs and Japanese EFL learners. Prepositions that co-occur with psy-passives have been typical targets of rote-learning in Japanese classrooms; If a comparison between NSEs and Japanese learners regarding the usage of the prepositions in psy-passives is made, the results would be insightful information for improving learning materials in English language teaching, especially for Japanese learners.

The subsequent parts of the chapter will be structured as follows. In the next section, previous studies that are related to the topic will be reviewed. Then, the data and methodology used in the present study will be explained in section 3.2.2. Then, the discussion of the results will follow in section 3.2.3. Implications of the present research for ELT in Japan will be discussed in 3.2.4. Finally, a concluding summary of the chapter will be provided in 3.2.5.

After that, following section 3.3 will focus on spoken English data, which has not been sufficiently adopted in Japanese education. Here, we compare the usage of psy-passives in two subcorpora from the BNC.

3.2.2. Literature Review

Before we turn to discuss the main research, this section provides a brief overview of related studies regarding passives and their teaching in Japan. Among various grammar items that are essential for English learners, passive construction is reported as one of the most difficult items for Japanese learners of English, and it is also said to be one of the fields that have been receiving relatively scant attention from researchers (Fuyuno, 2011; 2012; 2013; Fuyuno & Kawase, 2013; Carter & McCarthy, 1999).

The teaching of normal passive construction in English classrooms generally reflects the movement shifts in linguistics. In the period when transformational grammar and generative grammar were dominating the linguistic discussions, the teaching of the construction was largely performed in a form of reformation exercises between active sentences and passive sentences. Gradually, as the functional aspect of English started to be considered significant, descriptions of the functional aspects of the passive construction were added in grammatical explanations. We can see an example of this in a well-known textbook by Murphy (1994) in which the function of passives is explained explicitly together with a clear indication of structural descriptions by using active and passive sentences.

In more recent years, we can observe the reflection of corpus linguistics and the notion of awareness raising regarding the teaching of passives in McCarthy et.

al. (2005; 22-23). Here any explicit structural descriptions are no longer provided. Instead, a plenty of authentic examples are available for students to figure out the characteristics of the structure themselves, as well as more detailed description about when and how to use the construction in contexts which are larger than sentence-based examples (Fig. 3.1).



Figure 3.1. Corpus-based textbook “Touchstone” provides discourse contexts with examples of passive sentences.

Although the linguistic studies and their applications regarding the normal passives can be found as described above, corpus-based inquiries on marked passive constructions still remain rare. One of the rare examples of these studies is Carter and McCarthy (1999) which concerned with a specific structure of passive in English; the *get*-passive. By conducting a large-scaled research with The Cambridge and Nottingham Corpus of Discourse in English data, they found out that *get*-

passives are used more frequently than the *be*-passives in spoken discourse. They investigate the contexts where *get*-passives are used, and provide deep insights into the discourse environment for the structure and its communicative functions. In addition, Granger (1997) points out the absence and importance of corpus study in the teaching of passives. As these examples show, corpus-based studies on passives are one of the promising areas in applied linguistics and ELT research.

As Fuyuno (2011; 2012; 2013) describe, *psy*-passives have been taught in a confusing manner of sentence-based rote-learning in Japanese classrooms, where official English education has been exam-oriented and had a strong tendency toward the grammar-translation approach despite the called needs for communicative skills. In this context, *psy*-passives have been taught as “idioms” that express emotions or psychological reactions of subjects, together with *be*-verbs and specific prepositions.

For example, Japanese learners are usually encouraged to memorize specific sets such as “*be surprised at*” and “*be amazed at*” by rote as “idioms”, with corresponding Japanese translations. By the time learners memorize the “idioms”, they have already learnt the normal passive construction, generally in a manner of sentence-based transformations between actives and passives. Thus it is quite confusing for Japanese learners to learn the “idioms” as different grammatical items, although the structure is very similar to the passive construction. As a result of the

rote-learning of “idioms”, many Japanese English teachers and Japanese learners tend to assume that they cannot use a sentence such as “*John was surprised BY Bill.*”

As well as the confusing introduction of psy-passives as idioms, another problematic issue in Japan is a so-called washback effect from a significant impact caused by the National Center Test for University Admissions as mentioned in previous chapters (Cheng et.al., 2003; Taylor, 2005). Washback effect refers to an impact on language teaching curriculum and related issues from public examinations (cf. Cheng et. al, 2003; Watanabe, 2004). In this context, even though psy-passives are confusing in terms of their functions and structure, Japanese teachers and learners tend to focus on more surface issues such as to memorize “participle + preposition” combinations, because the standard entrance examination tends to contain questions regarding the combinations.

We can see an example of this issue in grammar reference books for Japanese learners of English (Bun-eido, 2013; Ishiguro, 2013). Bun-eido (2013) introduced psy-passives as “passives that take prepositions other than *by*” and encouraged readers to memorize sets of “*be*-verb + past participle + preposition” as idioms (Bun-eido, 2013; 221). The relevant section in the book provided example sentences with Japanese translations. The focus seems to be on the combinations of participles and prepositions because knowledge of such combinations is tested in

standardized examinations. Furthermore, a section lists combinations of “past participle + preposition” simply with a short translation. Figure 3.2 presents the example sentences and the list.

□A lot of people were surprised at the news.
(多くの人とその知らせを聞いて驚いた。)

□They are excited about going to a hiking.
(彼らはハイキングに行くのにわくわくしている。)

be surprised at (～に驚く)/ be satisfied with (～に満足する)

be disappointed in [at] (～に失望する)

be scared of (～をこわがる)/ be excited at [about] (～に興奮する)

be interested in (～に興味がある)

be pleased with [about] (～を気に入る/喜ぶ)

be shocked at (～にショックを受ける)

Figure 3.2. Single sentence-based examples and a list of combinations by Bun-eido (2013)

These examples indicate that the memorization of the combinations is given a high priority. Furthermore, other than the list of prepositions that can be used in psy-passives as shown in Figure 3.2, the book provided no contextual descriptions about when and how to use the different prepositions.

Similar tendencies can be observed in other reference books. Ishiguro

(2013) explained that “In English, the passive voice is used to express feelings and psychological states of a subject” and provided quizzes for combinations of *be satisfied with*, *be disappointed at*, and *be terrified at* (Ishiguro, 2013; 81–83). No further explanation was given for the difference in prepositions. Narikawa (2014) and Nakahara (2003) provided quizzes and/or a list of “past participle + preposition” combinations of psy-passives (Figure 3.3). The answer book shows only *with* and *at* respectively for these two sentences.

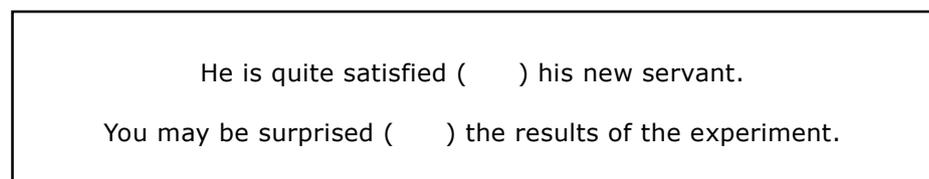


Figure 3.3. Example of quizzes on prepositions
for psy-passives by Nakahara (2003).

As we have seen, learning materials often contain insufficient contextual information about how to choose an appropriate preposition, and students are encouraged to memorize sets of “past participle + preposition” combinations. With these considerations, an examination of the effects of the rote-learning approach in Japan regarding psy-passives is expected to be fruitful. This study compares data for NSEs and Japanese EFL learners in terms of psy-passives and their co-occurring prepositions to evaluate the effects of rote-learning. Especially, the study focuses

on the appearance of preposition *by* since it is usually taught in teaching of normal passive construction, but not in rote-learning education for psy-passives.

Two research questions are posed in this section:

RQ1: Are the relations of psy-passives and their co-occurring prepositions different in NSEs data and Japanese learners' data?

RQ2: Is there a significant difference between NSEs data and Japanese learners' data in terms of the frequency of *by* in psy-passives?

To address these issues, NSEs' and Japanese learners' data were extracted from several corpora. For data analysis, correspondence analyses and a chi-square test were performed on the datasets. The next section discusses the details of the data and methodologies.

3.2.3. Data and Method

Data

In order to collect the data for the research, corpora data were examined and extracted. The data of NSEs were extracted from a subcorpus called *Belief and Thought* from BNC. The total data size was approximately four million words. As the name indicates, this subcorpus consists of 146 written materials that are related to

expression of personal or organizational ideas and views on various topics, such as religious affairs, moral issues and documentaries. This subcorpus was adopted because of several reasons. Firstly, the size of the subcorpus, approximately four million words, was more adequate for the purpose of the study than using the whole BNC which is too large to compare with Japanese learners' data.

Secondly, the contents of the subcorpus seemed to match the type of data needed for the present study. Since the texts contained in the subcorpus were about ideas and views on certain issues, the usage of psy-passives was expected to be more frequent than in other written subcorpora such as *Applied Science*. Since psy-passives are mainly used to express personal emotions, they are less in number when the topics of the writing require writers to be objective, such as in scientific or academic materials. In fact, the frequency of participle "surprised" was 13.09 times per one million words in *Applied Science*, while the frequency rose up to 27.07 times per one million words in *Belief and Thought*.

Next, the data of Japanese learners were extracted from several learners' corpora, namely: Japanese EFL Learner Corpus⁴, Nagoya Interlanguage Corpus of English⁵, and Corpus of English Essays Written by Japanese University Students⁶. Each corpus consists of written English data by Japanese students, obtained through controlled writing tasks without dictionary use. The total data size of learner corpora for the present study was approximately three hundred thousand words.

The past participles investigated in the study were the seven participles listed in Table 3.1 below. They were chosen because each participle appeared with preposition which appeared more than 10 times in learners' corpora.

Table 3.1. List of past participles investigated

excited	surprised
interested	tired
pleased	worried
satisfied	

The prepositions investigated were those in Table 3.2 below. The five prepositions in the right column are chosen because they are often taught as parts of "idioms" in Japanese English education. Preposition *by* was included in order to evaluate the effects from the rote-learning approach in Japanese classrooms. Most Japanese students comprehend that *by* is a typical preposition for passive construction, but as mentioned in the previous section, *by* is not usually taught with psy-passives in Japan.

Table 3.2. List of prepositions investigated

by	at
	of
	with
	in
	about

Method for Data Collection and Analyses

In order to obtain necessary data for the comparison, the following steps were performed through the corpora concordancers. First, to specify the passive use of the target participles, the frequencies of the 7 participles and the frequencies of their co-occurring *be*-verbs in left 1 to left 5 were examined in both NSEs and learners' data. Next, co-occurring prepositions within right 1 to right 5 of the past participles were counted. After extracting those raw-frequencies, the percentages of each preposition usage in total preposition frequencies with each participle were calculated. On the obtained data, correspondence analyses and a chi-square test were performed in order to statistically investigate the two research questions (cf. Benzecri, 1992).

3.2.4. Results and Discussion

Results of Corpus Investigations

Through the data collection process described in the previous section, raw-frequencies and percentage data were obtained from the BNC and learners corpora. The data were gained as shown in Table 3.3.-3.6.

Table 3.3. Raw frequencies from BNC (NSEs data)

	by	at	of	with	in	about	prep. total	passive total
excited	5	0	0	0	3	7	15	32
interested	3	2	26	3	161	6	201	207
pleased	4	2	3	16	5	0	30	70
satisfied	13	2	0	21	5	0	41	92
surprised	16	16	8	1	5	0	46	77
tired	1	2	14	3	2	0	22	38
worried	7	1	3	0	3	22	36	45
total	49	25	54	44	184	35	391	561

Table 3.4. Percentage data from BNC

	by	at	of	with	in	about
excited	33.33	0	0	0	20.0	46.67
interested	1.49	1.0	12.94	1.49	80.10	2.99
pleased	13.33	6.67	10.0	53.33	16.67	0
satisfied	31.71	4.88	0	51.22	12.20	0
surprised	34.78	34.78	17.39	2.17	10.87	0
tired	4.55	9.09	63.64	13.64	9.09	0
worried	19.44	2.78	8.33	0	8.33	61.11

Table 3.5. Raw frequencies from Japanese learners' corpora

	by	at	of	with	in	about	prep. total	passive total
excited	3	1	0	1	6	2	13	85
interested	0	0	0	0	1	1	117	117
pleased	0	1	2	13	1	0	17	46
satisfied	1	1	2	43	2	0	49	71
surprised	2	59	8	3	2	2	76	302
tired	2	3	35	3	1	0	53	298
worried	0	0	0	0	1	21	22	32
total	8	65	47	63	1	26	347	951

Table 3.6. Percentage data from Japanese learners' corpora

	by	at	of	with	in	about
excited	23.08	7.69	0	7.69	46.15	15.38
interested	0	0	0	0	99.15	0.85
pleased	0	5.88	11.76	76.47	5.88	0
satisfied	2.04	2.04	4.08	87.76	4.08	0
surprised	2.63	77.63	10.53	3.95	2.63	2.63
tired	3.77	5.66	66.04	5.66	18.87	0
worried	0	0	0	0	4.55	95.45

Firstly, to investigate the relations of participles and prepositions, correspondence analyses were performed on both BNC and Japanese learners' data sets. The data used for the statistical procedure were Table 3.4 and Table 3.6.

The result of the correspondence analysis for BNC data is shown as Figure 3.4. The result for Japanese learners' data is shown as Figure 3.5 below.

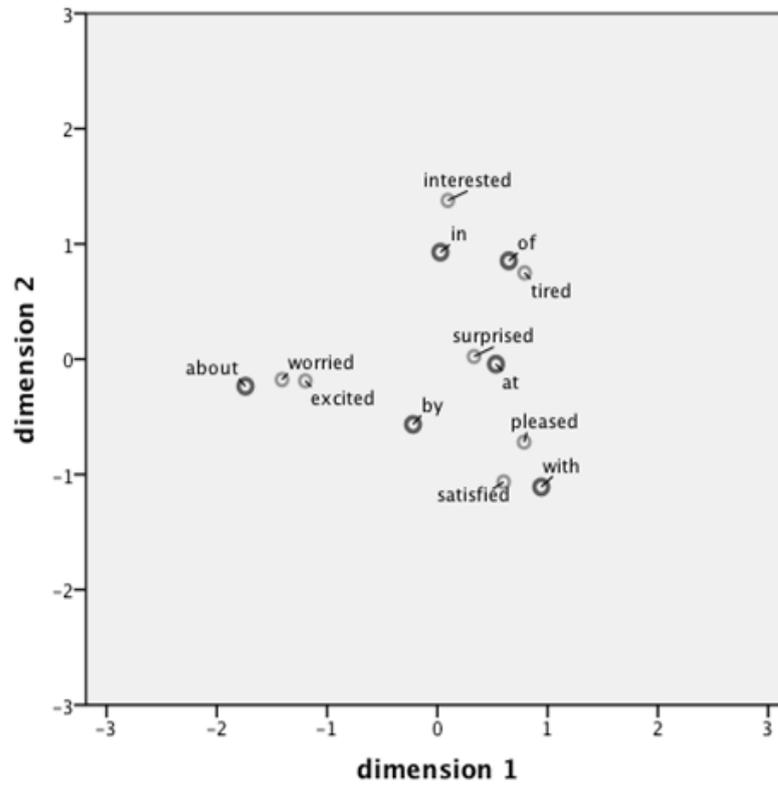


Figure 3.4. The plot of result of correspondence analysis with NSEs data

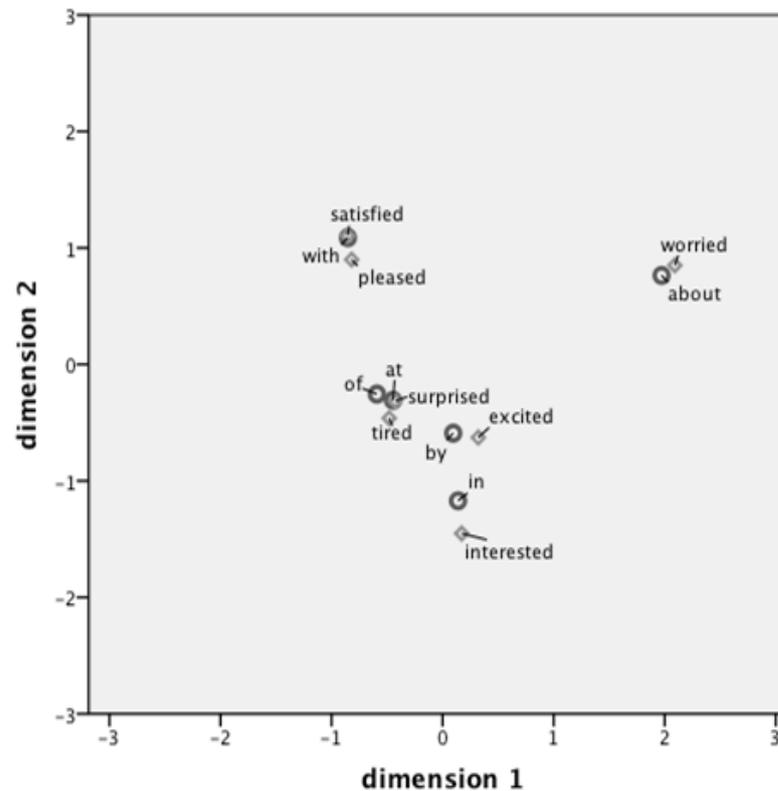


Figure 3.5. The plot of result of correspondence analysis with Japanese learners'

data

By looking at the relationships between the prepositions and the participles, we can see that the preposition use of Japanese learners (Fig. 3.5) is less flexible compared to NSEs data (Fig. 3.4). Especially, there are strong connections between “*surprised + at*”, “*satisfied + with*” and “*pleased + with*”. These combinations are located so closely that some of them even overlap in Figure 3.5. It indicates that Japanese learners tend to use specific sets of “participle + preposition” combinations that are likely to be memorized through rote-learning. From these results, it can be observable that there are effects of rote-learning on Japanese learners regarding the selection of prepositions.

Secondly, in order to investigate the second research question, the frequencies of *by* in both data sets were obtained (Table 3.7).

Table 3.7. Frequencies of by in the Total Frequencies of Prepositions

Corpus	Prep. total	Raw freq. of <i>by</i> (%)
BNC	391	49 (12.5%)
Japanese learners' corpora	347	8 (2.3%)

In order to evaluate the significance of the difference in the frequencies of *by* between BNC and Japanese learners' data, a chi-square test was performed. From the test, it was confirmed that the difference is statistically significant ($p < .01$).

The result and data showed that there are certain co-occurrences of *by* with psy-passives in BNC, but much less in Japanese learners' data.

From the results so far, the discussion can be summarized as follows regarding the two research questions. The first research question was: *Are the relations of psy-passives and their co-occurring prepositions different between NSEs data and Japanese learners' data?* The answer for this question is confirmed to be YES. From the results of the correspondence analyses, BNC data (Fig. 3.4) showed a greater variety of preposition uses and the connections between prepositions and past participles were more flexible compared to Japanese learners' data. On the other hand, the result from the correspondence analysis on the Japanese learners' data (Fig. 3.5) showed a less variety of preposition uses. The possible reason was discussed to be the influence of rote-learning of "participle + preposition" combinations.

The second RQ was: *Is there a significant difference between NSEs data and Japanese learners' data regarding the frequency of by in psy-passives?* The answer for the question is also confirmed to be YES, there was a significant difference according to the result of the chi-square test ($p < .01$). It was observed that the frequency of *by* in psy-passives is much less in Japanese learners' data compared to NSEs data.

Implications for English Language Teaching

From the results of the corpus investigations, it is clear that the rote-learning approach in Japanese classrooms has affected the usages of prepositions in psy-passives by Japanese learners. Since the learners tend to memorize the specific sets of “past participle + preposition” combinations, they might not know how to choose appropriate prepositions according to contexts. Therefore, a better teaching approach, rather than the simplistic sentence-based rote-learning, is needed for Japanese learners.

One possible approach would be to implement more context-oriented materials in Japanese classrooms. For example, from the results of the correspondence analysis of the BNC data, we can see that it is quite likely that NSEs choose proper prepositions depending on the discourse contexts. Thus, instead of mechanical rote-learning, it is possible to utilize animation clips that provide contextual information then have learners describe the scenes. Regarding the usage of psy-passives, what is essential to the selection of prepositions is grasp of the situation by the speaker. For example, when choosing *by* and *at* as prepositions following *surprised*, as already pointed out in the previous research, the preposition *by* is used when there is an influence from an active agent to the sentence subject. On the contrary, the use of *at* suggests that the surprised feeling is the result of observation by the sentence subject (Navarro-Ferrando, 1998).

Let us take an example of “*be surprised at/by*”. It might be still too abstract for some students if they merely receive explanations that both *at* and *by* can be used with surprised. In order to show them the differences in contexts, short animations such as shown in Figure 6 and Figure 7 can be useful. In situation 1 described in Figure 3.6, a man is going home and a ghost surprises him from behind. In situation 2 described in Figure 3.7, a boy encounters someone wearing a fancy costume on Halloween day. By using short animations such as these, it is possible to describe different contexts vividly, let students think about what sentence they would use to describe the situations, and share their opinions in small groups.

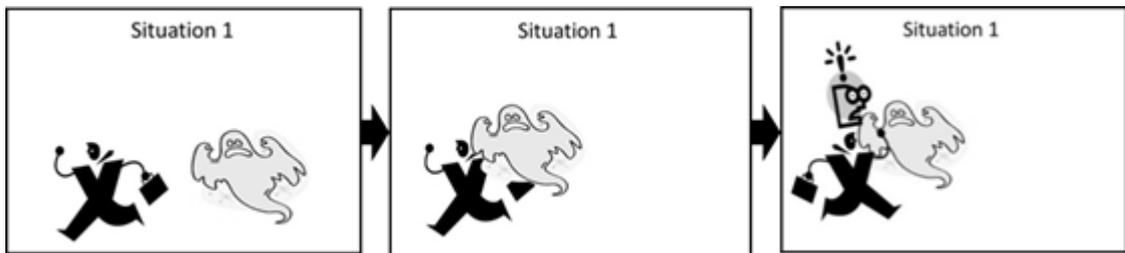


Figure 3.6. Situation 1: A man is going home. A ghost suddenly surprises him from behind.
 【Possible Answers: *The man was surprised by the ghost./*
 (?) *The man was surprised at the ghost.*】



Figure 3.7. Situation 2: On Halloween Day, a boy encounters someone who is wearing a fancy costume.

【Possible Answers: *He was surprised at the nice costume./*
He was surprised at his friend/ He was surprised by his friend.】

For example, in both situations *at* and *by* are possible to use with *surprised*, however *by* will be more natural for situation 1. In situation 2, both *at* and *by* can be used, but some would say *at* is more natural for this situation compare to situation 1. This is due to the characteristics of the schematic meaning of preposition *at* (Navarro-Ferrando, 2008). This kind of activity would be useful in several aspects. Not only that students can confirm their understanding of the difference in situations, but also that they can actually notice that the perception of a situation differs according to each person and there may not be an absolute 'correct' answer, by sharing their experience with peers. Too often Japanese students are forced to memorize one 'correct' answer, and by doing so they sometimes cannot capture the idea of context-dependency itself. By engaging discussions with other classmates, based on vivid contextual information such as animation clips, students can discover that each classmate has a different interpretation about the context, and it is natural to have different answers as far as those are due to context-dependency.

3.2.5. Summary

In this section, the usage of psy-passives with their co-occurring prepositions was compared between NSEs data and Japanese learners' data. From the corpus research, it has been discussed that the rote-learning approach in Japanese classrooms had affected Japanese learners regarding the selection of

prepositions. It was argued that these findings should be applied in developing more context-oriented materials for learners to study context-dependency of the selection of prepositions in psy-passives.

As Carter & McCarthy (1999) showed an example in their study of passive construction, corpus research is one of the most effective methods to provide authentic supporting evidences from actual usages of the language and apply these in language teaching. Although this section focused on the co-occurring prepositions in psy-passives, there are still many more components of passives and other grammatical items that need further investigations. Also, the size of the learner corpus was smaller than that of the BNC sub-corpus in the present study. In future studies, more comparable corpora would be needed to examine the reproducibility of the results. To reveal the complete features of constructions and examine their pedagogical applications, more corpus-based studies, material creation and evaluations are necessary.

3.3. Spoken English and Written English

In Section 3.2, we confirmed that psy-passives are generally taught in a rote-learning manner with “specific verb + preposition” sets. Furthermore, Japanese EFL learners who are expected to be affected by the teaching method showed significantly different usages from those of NSEs. In this section, we will cover a

wider range of data on the evidence-based approach, focusing on spoken language data which has not been attracting much attention in Japan so far, and clarifying the difference between written and spoken English data on psy-passives. With these considerations in mind, there are two research questions for the present study:

RQ1: What differences can be found between spoken and written English by NSEs regarding the usage of psy-passives?

RQ2: What are the implications of this research for ELT in Japan?

The first research question reflects a fundamental research interest of this study. To examine the differences, authentic spoken and written English data will be compared especially from a perspective of co-occurring prepositions and other following-elements such as infinitival *to* and *that* clauses. Previous studies have discovered different characteristics between spoken and written languages. For example, as many corpus studies such as McCarthy (1998), Carter and McCarthy (1999) and Carter (2004) have noted, the spoken language in natural conversations has unique on-going characteristics that resulted from the time pressure and less-planned selections of words compared to written texts, which can be edited by writers.

Moreover, the spoken language is also reported to be more context

dependent and situational. Thus, it can be assumed that speakers engaging in everyday conversations may tend to use less-fixed preposition patterns compared to written English. So far, no comparative analysis between spoken and written English regarding psy-passives has been made. Therefore, it is expected that the result of this present study would provide interesting insights for more thorough understanding of the contrast between spoken and written English and psy-passives usages.

In addition, as shown in the second research question, we will further examine the implications of the findings for the purpose of English education in Japan. Previous sections argued that there are gaps between NSEs' and Japanese learners' writings on the usages of psy-passives; the influence of the rote-learning approach has been confirmed by statistical analysis. In this circumstance, the implications from the present study, especially from the fact that it utilizes spoken English data, will be meaningful for future ELT in Japanese classroom.

3.3.1. Data and Method

In order to collect the data for the research, two subcorpora of the BNC were used to extract both the spoken and the written data. One of the most significant advantages of the BNC is its large size. The general corpus contains more than 100 million words in total, and the spoken segments of the corpus occupy approximately

10 million words of the total data. This is relatively large compared to other available spoken corpora such as Michigan Corpus of Academic Spoken English (MICASE) and The Santa Barbara Corpus of Spoken American English.

The next point examined was the contents of the spoken segments. The spoken data of the BNC consist of free conversations and context-governed discussions. Although the discussion parts include broadcasted English and preplanned speech, the free conversation part called *Demographic* subcorpus consists of naturally occurring dialogues between British people. By considering these factors, the *Demographic* subcorpus of the BNC was chosen for the present study as its content matches the aim of the study as well as that it has relatively large size of approximately 5 million words.

After selecting the subcorpus for the spoken data, a subcorpus of the written segments of the BNC called *Belief and Thought* was chosen for the written data of the research. The subcorpus was chosen for the same reasons as noted in Section 3.2.3. In addition, the size of the subcorpus (4 million words) matched that of the *Demographic* subcorpus (5 million words).

Target Participles and Following Elements

For comparing the characteristics of the spoken and written data regarding psy-passives, 20 participles were selected. They were chosen because all of them

appear in official English textbooks used in Japanese high schools.

The prepositions investigated in the study were following six prepositions: *by, about, at, in, with, and of*. These six prepositions were chosen because of the fact that they are usually taught as a part of psychological “idioms” in Japanese English education. Furthermore, in order to compare the characteristics of the spoken and the written data more closely, the co-frequencies of infinitival *to* (e.g. *I was surprised to know his age.*), *that* clause (e.g. *I was surprised that he was so young.*) and full-stop were also investigated.

Full-stop in this study refers to cases where psy-passives take nothing after their past participles in terms of meaning, such as the following patterns.

A) When psy-passives end with periods or exclamation marks.

(e.g. *I was so surprised!*)

B) When clauses of psy-passives end with commas.

(e.g. *I was shocked, then a girl came...*)

C) When psy-passives end with *and* that introduces another clause.

(e.g. *I was very disappointed and then I...*)

As previously mentioned, the spoken language is reported to be more context dependent and situational, resulting in frequent ellipses of certain elements

such as subjects and auxiliary verbs. Therefore, it was assumed that it would be reasonable to examine whether psy-passives that simply end with participles was more frequent in spoken data than in written data.

3.3.2. Method

In this section, research methodology for the study will be described. The research methodology was the same for the both spoken and written data sets. In this study, close examinations were carried out on all examples of the target participles. All examples of the target participles were examined to extract only the usages as passive sentence and to count the prepositions and other elements that followed the past participles.

After obtaining the raw frequency of the each past participle that appeared as a part of passive construction, and the frequencies of following-elements such as prepositions, infinitival *to*, *that* clause and full-stop, the percentage frequencies were counted. In order to examine whether there were significant differences between the spoken data and the written data, statistical investigations were carried out. The results of the corpus study and statistical tests will be shown in the next section.

3.3.3. Results and Discussion

3.3.3.1. Results

After collecting the frequency data from the both spoken and written data sets, percentage data were obtained as shown below in Table 3.8 and 3.9⁷. The percentage numbers indicate the ratio of the item in total usage of each participle as passive construction.

Table 3.8. Percentage frequencies from the spoken data

	by	about	at	in	with	of	to	that	f-stop
amazed	0	3.23	22.58	0	0	0	0	22.58	51.61
ashamed	0	0	0	0	0	69.23	0	0	30.77
bored	0	1.98	1.98	2.97	0	3.96	10.89	0	78.22
confused	0	22.22	11.11	0	0	0	0	0	66.67
convinced	0	9.09	0	0	0	13.64	0	50.00	27.27
delighted	0	0	0	0	12.5	0	29.17	25.00	33.33
depressed	14.29	7.14	0	0	0	0	0	7.14	71.43
disappointed	0	2.33	2.33	13.95	18.60	0	0	9.30	53.49
embarrassed	4.76	14.29	4.76	0	0	0	14.29	0	61.90
excited	3.85	3.85	3.85	0	3.85	3.85	0	7.69	73.08
frightened	0	1.75	0	0	0	22.81	17.54	7.89	50.00
hurt	0	0	0	0	0	0	0	0	100.0
interested	0	0	0	48.08	1.28	1.28	6.41	5.13	37.82
pleased	0	7.37	0	0	19.30	0	12.98	16.84	43.51
satisfied	0	0	0	0	41.67	0	0	25.00	33.33
scared	0	0	2.5	0	0	33.75	12.50	0	51.25
shocked	0	0	5.26	5.26	0	0	0	0	89.47
surprised	2.26	2.82	6.21	5.08	2.26	2.26	8.47	15.82	52.54
upset	0	16.94	1.61	0	0	0	1.61	8.06	71.77
worried	0	43.77	1.07	1.78	0	0.71	1.78	9.96	39.15

Table 3.9. Percentage frequencies from the written data

	by	about	at	in	with	of	to	that	f-stop
amazed	14.29	0	38.10	0	0	0	19.05	19.05	9.52
ashamed	0	13.33	0	0	0	73.33	13.33	0	0
bored	13.33	0	0	0	33.33	0	13.33	0	40.00
confused	21.95	9.76	0	0	39.02	0	4.88	0	24.39
convinced	7.29	0	0	1.04	0	14.58	0	73.96	3.13
delighted	5.13	0	10.26	0	10.26	0	51.28	15.38	7.69
depressed	10.00	30.00	0	0	0	0	0	0	60.00
disappointed	8.82	0	11.76	2.94	41.18	0	0	8.82	26.47
embarrassed	40.00	0	13.33	0	0	0	13.33	0	33.33
excited	30.00	40.00	3.33	13.33	0	0	3.33	3.33	6.67
frightened	21.21	0	3.03	3.03	0	45.45	6.06	6.06	15.15
hurt	41.18	0	0	0	0	0	0	5.88	52.94
interested	0.64	0	0	87.90	0	0	0.64	0.64	3.18
pleased	5.00	0	1.67	0	21.67	0	41.67	11.67	18.33
satisfied	14.06	1.56	0	0	29.69	0	3.13	12.50	39.06
scared	0	0	0	0	0	42.86	0	0	57.14
shocked	36.36	0	18.18	0	0	0	18.18	9.09	18.18
surprised	20.63	0	20.63	0	1.59	0	22.22	20.63	14.29
upset	35.71	14.29	7.14	0	0	0	14.29	0	28.57
worried	25.00	53.57	3.57	0	0	0	0	0	17.86

Now that the frequency data are obtained, let us consider the research questions by analyzing the data above. The first research question was: *What differences can be found between spoken and written English regarding the usage of psy-passives?* From the co-frequency data in Table 3.8 and Table 3.9, we can see

some different tendencies between the spoken and written data sets.

Firstly, comparing the co-frequencies of the past-participles and the following-elements, it seems that the co-occurrences of the following-elements are less fixed in the spoken data but more fixed or established in the written data. In fact, when following-elements that appeared more than 20% of the total frequency of following-elements with each participle in Table 3.8 and 3.9 are marked, there are 19 combinations in the written data, but only 7 cases in the spoken data⁸. This difference of the numbers was proved to be statistically significant with a chi-square test ($p = 0.0017$). The frequently used combinations in each subcorpus are summarized in Table 3.10 below.

Table 3.10. Frequent combinations

Spoken data	Written data
confused about	surprised by
worried about	confused by
amazed at	embarrassed by
satisfied with	excited by
interested in	frightened by
frightened of	shocked by
ashamed of	upset by
	worried by
	hurt by
	depressed about
	excited about
	worried about
	surprised at
	amazed at
	interested in
	satisfied with
	pleased with
	bored with
	confused with
	disappointed with
	frightened of
	scared of
	ashamed of

It is seen that the general co-frequency of preposition *by* was higher in the written data. More discussions on these results will be provided in following sections.

Secondly, from the percentage of full-stops in both data sets, it appears that the percentage of full-stop was generally much higher in the spoken data than in the written data. In the spoken data, cases where full-stop was used more than 40% of the frequencies of all following-elements occurred with 14 participles, and the percentage was even 100% with *hurt*⁹. On the other hand, in the written data, the number of past-participles with which full-stop was used more than 40% was only 4. In fact, when a chi-square test was performed on the average percentage frequency of full-stop in the spoken and the written data, the difference was proved to be statistically significant ($p = .0014$). Possible reasons behind this phenomenon will be addressed in the next section.

3.3.3.2. Discussion

After observing the results of the data collection and statistical tests, now we turn to a closer discussion of factors behind the findings. Firstly, through the examination of the data, we have founded that the frequency of full-stop was significantly higher in the spoken corpus than in the written corpus. Possible factors that are likely to be parts of the reasons will be discussed in this section.

To begin, in previous studies, it has been pointed out that spoken English has a significant number of “incomplete” sentences compared to written English (McCarthy, 1998; Leech, 2000). Because of its strong context dependent nature,

spoken English often contains ellipses of grammatical items, and the length and complexity of utterances tend to be reduced (Leech, 2000). On the other hand, written English is generally more formal and less context dependent; writers usually make longer and more complex sentences compared to speakers. If this also appears to the case of psy-passives, this could mean that factors which caused emotional changes to subjects in psy-passive sentences are more likely to be explained or introduced in the same sentence in written English (cf. Sinha, 1974; 1978). In fact, Biber et. al. (1999) notes that approximately 90% of the agent phrases in passives bring new information in the discourse. However, in the spoken language, the agentive factors in psy-passives may be apparent from the precedent narratives, or will be explained in another sentence which follows psy-passives. The examples below indicate these patterns in the spoken and written data.

<SPOKEN DATA>

- (1) S1: I couldn't, I had pains all over place! I couldn't speak! Couldn't do erm, anything, **I was surprised**.
 (2) S1: I wouldn't fancy going down no bloody motorway, hundred eight in one of them!
 S2: I tell you some of them Robi
 S3: I bet [unclear], I bet it's [unclear]
 S1: I know!
 S3: [unclear]
 S2: He had a [pause] Honda Civic engine in it! [laughing] Oh, oh dear!
 S1: Shouldn't think anybody'd insure it!
 S2: **I'm surprised!**
 S1: Then that bloody prat towing down motorway at hundred mile an hour!

<WRITTEN DATA>

- (3) The Duke of Edinburgh saw none of his children being born, but **no one was surprised at** Prince Charles' presence at the birth of Prince William.
 (4) **An Australian visitor was surprised at** the number of people still smoking in Britain and the areas where smoking is allowed.
 (All examples were retrieved from the BNC, highlights by the author.)

The examples above illustrate the difference in contexts where psy-passives are used. Interestingly, in the extracts from the written data above, it seems that the psy-passives are used as introductory parts for bringing in new information regarding discourse topics, as discussed in Biber et. al. (1999). However, in the examples of spoken English, the psy-passives seem to function as comments on situations that are already apparent from preceding discourse. As Svartvik (1990) and Aijmer et. al. (1991) point out, contextual commenting is one of unique characteristics of the spoken language. Since normal conversations usually have more than two participants, commenting on the utterance made by other speakers is a pervasive phenomenon, and it is also a pervasive strategy in storytelling by single speakers (Carter & McCarthy, 1997).

In discourse analyses by Carter and McCarthy (1997; 57) with CANCODE data, a psy-passive with *impressed* also appears as a short full-stop sentence, functioning as a subjective comment from a listener. This finding is interesting since it indicates that typical communicative functions of psy-passives might differ in spoken and written languages. In spoken language, psy-passives may often function as a commenting device on other speakers' stories, or as a way to express the feeling of speaker on his/her own experience. On the other hand, in written language, the construction is likely to be used as a topic introducer, or used when the agent is not specified. As McCarthy (1998) asserts with his research of idioms

and fixed expressions with spoken English data, various types of commenting devices can be found in natural conversations. Since psy-passives seem to form a part of these devices, the communicative functions of psy-passives would be an interesting area of further research.

Secondly, we have also found that the written data contained more fixed or well-established combinations of past participles and following-elements. In comparison, spoken data showed less-fixed characteristics. It would be reasonable to say that this reflects the on-going and face-to-face nature of the spoken language, namely that speakers seem to choose prepositions according to contextual considerations, or they do not need to use prepositional clause because the agentive factors are apparent from surrounding contexts; we can see the instances of this case in (1) and (2) above.

Furthermore, it was also confirmed that general usage of preposition *by* was more frequent in the written data than in the spoken data. This result seems to support the discussion above; in the written data, psy-passives may often be used to introduce new information in the discourse by bringing the information through prepositional clauses. Since the written data could be examined and edited unlike the unrehearsable spoken data, writers would have time and chance to utilize the psy-passives to control the flow of information in terms of given/new information. Moreover, writers might also consciously choose a conventionally preferred

preposition for each participle, or the most suitable prepositions according to contexts, resulting in the high number of frequent combinations as shown in Table 3.10 (cf. Chafe, 1987).

3.3.3.3. Implications for ELT in Japan

As described in Section 3.3.3.2., there were different tendencies between the spoken data and the written data regarding the usage of psy-passives of English. The differences included; more fixed combinations found in the written data and the higher frequency of full-stop in the spoken data. As suggested in Section 3.3.3.2., psy-passives are expected to be one of the important constructions in terms of effective communication, because they provide methods for English users to express themselves more overtly in relation to their feelings on the topics of undergoing conversations.

As mentioned previously in Chapter 1 and 2, Japanese English education has been focusing on the communicative aspect of English in recent years. Thus, it would be necessary for students to learn how to express their emotions or feelings in everyday situations. With these arguments in mind, the implications of the results will be closely discussed below.

Firstly, the simplest and most significant finding was that there were differences between the spoken data and the written data on the usage of psy-

passives. In the field of ELT in Japan, the contrasts between spoken and written English have been receiving little attention despite the adoption of the communicative approach. In particular, it is problematic that the emotional “idioms” taught in Japanese classrooms seem to be largely based on usages in written English. Combinations of participles and prepositions that are commonly taught in Japan include those combinations that appeared in our written data results, for example: *surprised at, amazed at, confused with, and disappointed with.*

Although there is a fact that these combinations are often asked in the standardized university entrance examination in Japan, the characteristics of spoken language must be adopted into ELT in Japan more in order to encourage conversational fluency of Japanese learners. The communicative function of psy-passives would be a suitable topic. In this research, it was revealed that psy-passives in the spoken data tended to function as short comments from speakers on situations explained by other speakers, or on his/her own stories. This function of English psy-passives must be note-worthy for learners. To encourage the understanding of the function, awareness raising in functional and structural differences between spoken and written English regarding the construction would be useful for Japanese learners.

Secondly, as McCarthy (1998) suggests, the factors that are found to be common in the spoken and the written data must not be ignored. In this study, it

was revealed that certain combinations of participles and prepositions are commonly frequent in both spoken and written data sets. These combinations were: *worried about*, *amazed at*, *satisfied with*, *interested in*, *frightened of*, and *ashamed of*. In Fuyuno (2012), *worried about* and *interested in* were reported as combinations that are established as set patterns of adjectival expressions. The other four patterns may be following the same route. From these observations and the result in this study, it can be said that the combinations may be important patterns for learners that can be prioritized, since they were frequently used as fixed sets in both authentic spoken and written English.

3.3.4. Summary

In this section, spoken and written English data were compared with regard to the usage of psy-passives. The results of the corpus study revealed significant differences between spoken and written English in terms of the use of psy-passives; written data showed more fixed combinations of specific past participles and prepositions, whereas spoken data had a significantly higher frequency of full-stop psy-passives.

Although the findings of this study could be applicable to English education in Japan, this study has certain limitations. First, the total data that were examined in the corpus research were limited in terms of size because maintaining a good

balance between the amounts of spoken and written data was given priority. Therefore, it would be better to compare more data on psy-passives using suitable larger corpora.

Second, during the process of data collection for this research, there were many more patterns in psy-passives than those examined in this study. Specifically, the elements examined in this study, in addition to the 20 participles, were limited to the prepositions *by, about, at, in, with, and of*; the infinitival *to; that* clause; and the full-stop. However, during the examinations of the examples in the corpora, it was noticed that there were some frequently occurring patterns that followed after the participles. These included patterns such as *when* clauses and clauses starting with *and* or *then* or *as*. On the basis of these facts, there are expected to be interesting outcomes if further studies on these issues are conducted.

Furthermore, although development of practical methods and materials have not been the target of the main discussion of this study, discussing these issues would be fruitful for Japanese teachers and learners of English. Therefore, applications of the findings of this study within the teaching situation, such as development of practical materials and activities, should be conducted and evaluated. Importantly, specific features of the Japanese context must be considered in the process of these practical applications given that the strong impact of the standardized entrance examination is expected to continue in the Japanese

classroom. Considering this situation, the discussion of the application of corpus research to English language teaching in Japan should maintain a good balance between practicality in the real world and the need for preparing for examinations.

3.4. Summary of the Chapter

In this chapter, based on the needs analysis results of Chapter 2, we first investigated whether English usages in textbooks in Japan are authentic, and if not, how this affects Japanese EFL learners, considering the teaching of passives as an example. Furthermore, by focusing on spoken English data, which appear to have received little consideration in Japanese texts to date, we analyzed the usage of passives in authentic communication.

The analysis results indicated that examples of psy-passives handled in Japanese schools are limited and that these are presented with fixed combinations of verbs and prepositions. Moreover, the analysis of the data from the corpus of Japanese EFL learners confirmed that the impact of school English is significant for Japanese learners. Japanese learners had a more fixed tendency of usages than NSEs.

By analyzing corpus including spoken data, it was revealed that the usage of psy-passives in spoken data has a discourse function and that the number of full-stop sentences is significantly larger in spoken data than in written language data.

Furthermore, we found that the combinations taught as set phrases in Japanese English education are consistent with the result of NSEs' written data. As indicated in Chapters 1 to 3, school education in Japan does not fully reflect spoken usages. Thus, investigations based on spoken language data are expected to be fruitful to teach communicative English skills effectively.

The previous section focused on the semantic content of English and mainly dealt with written and spoken language. However, in human communication, the importance of nonlinguistic elements such as gestures and speech factors has been indicated (Knap, Hall, & Horgan, 2013; Vargas, 1986). As a result of the needs analysis in Chapter 2, we found that there is a need for English public speaking skills. Public speaking usually involves face-to-face communication; thus, in addition to uttered contents, factors of speech and gesture play a major role in determining the quality of communication. Therefore, in Chapter 4, we will focus on public speaking and analyzes multiple factors, namely, uttered contents, speech factors, and motion factors. The investigation is expected to reveal useful information for Japanese EFL learners.

Chapter 4. Multimodal Evidence for English Public Speaking

4.1. Introduction

Based on the needs analysis results of Chapter 2, we discussed the problems of the teaching method used in Japanese schools and ways in which they affect the usage of Japanese learners in Chapter 3. In this chapter, we focus on public speaking skills, another point that was identified as a major need in Chapter 2. Through data analysis using multimodal corpora, we aim to extract useful information for effective teaching. By analyzing the performance of Japanese EFL learners who were evaluated by both NSEs and nonnative speakers of English, this study investigates correlations between speakers' proficiency and performance factors to discuss elements necessary for effective performance.

Public speaking is defined as speaking in front of an audience in a limited time on a certain topic (Fukazawa & Hillman-Kobayashi, 2012). Opportunities for public speaking will continue to increase not only in Japanese people's mother tongue but also in English. In this globalized world, the development of ICT is also remarkable. It provides increasing opportunities to disseminate opinions in English on various occasions such as during online meetings as well as during face-to-face communication with people from various backgrounds, including both English speaking countries and ESL/EFL countries. In addition, university entrance examinations in Japan are expected to include an English speaking test, and more

universities may adopt presentations in their individual examinations as mentioned in Chapter 2.

These trends show that all groups of Japanese EFL learners, from school to business level, require the ability to deliver opinions logically in front of various people; moreover, there is an increasing demand for pedagogical methods to teach English public speaking skills. In fact, the needs analysis results in Chapter 2 showed a strong requirement for English public speaking skills. The participants, specifically Japanese businesspeople who currently work in the field of global business after receiving school education in Japan, answered that they want to improve their skills related to public speaking: for instance, "giving opinions in meetings," "giving speeches," and "giving presentations" were observed as the most common responses (Chapter 2, Section 2.2.4.). However, public speaking in English tends to be difficult for Japanese people.

Public speaking is one of the representative examples of social phobia, and many people experience anxiety and fear regardless of nationality or generation (Goleman, 1984; Kessler, Stein, & Berglund, 1998; Pertaub, Slater, & Barker, 2001). Furthermore, Japanese students have few opportunities to conduct public speaking in English during school education. Kawachi (2012) surveyed first-grade university students' experience of public speaking at junior high school and senior high school. According to the survey results, 36.4% of the students had an experience of

conducting public speaking in Japanese, whereas only 17.16% had performed it in English.

In addition to the small number of opportunities to practice, there is also the problem of the difficulty of teaching English public speaking. Public speaking needs to include various factors for effective performance. In addition to constructing the content so that it is understood clearly, there are factors of delivery, including gestures, eye contact, attitude, speech rate, voice volume, and voice pause. However, it is difficult to effectively provide instructions on such factors in large classes.

Furthermore, although various textbooks have focused on English public speaking for EFL/ESL learners, many of them have included both writing and speaking aspects, and the major part of textbooks tends to focus on the construction of speech rather than its effective delivery (cf. Jaffe, 2012). In addition to the content, the quality of a public speech is affected by nonverbal factors in delivery (Griffin, 2011). Despite this fact, nonverbal factors are typically not fully described in EFL materials, or even when considered, descriptions of such factors tend to be insufficient or ambiguous.

For example, even when the importance of eye contact is addressed, the description of how to maintain effective eye contact tends to be vague (e.g., "Look in at least three directions." in Jaffe (2012)). More explicit examples based on

concrete evidence are required for effective teaching and learning. From this perspective, it has not been easy for learners to practice public speaking because there have been few teaching materials from a quantitative point of view. However, this problem can be resolved by an evidence-based approach, especially using data from multimodal corpora.

A multimodal corpus is a database of human behavior and communication that includes various types of data input in contrast to a traditional text-based database (cf. Knight, 2011). Corpora evolved gradually with the development of data recording and storage technology. Thus, spoken language data such as those used in previous sections can now be provided with the recorded voice sound itself, in addition to the transcribed text data. In fact, nowadays, many corpora provide voice sound data (e.g., MICASE, Santa Barbara Corpus of Spoken American English) and video data (e.g. the British Academic Spoken English Corpus (BASE)). In the analysis of discourse, new insights can be obtained by analyzing features of speech (intonation, accent, voice volume, pose, etc.) and nonlinguistic elements such as nodding, gesture, eye contact, and speaker-listener position (Adolphs & Carter, 2013; Knight, 2011; Tsuchiya, 2013). Therefore, this section conducts a quantitative analysis using multimodal corpus data to provide an evidence-based approach to English public speaking education.

4.2. Related Studies

Although innovative computer technology and tools have been expanding the possibility of corpus linguistics, the major mega-sized corpora mentioned so far tend to provide only text-based English data; this type of corpora are termed monomodal, according to the number of media for data annotation, presentation, and analyses (cf. Knight, 2011; Tsuchiya, 2013; Adolphs & Carter, 2013). Undoubtedly, these text-based data are tremendously valuable for pedagogical and linguistic applications; however, when we consider more interactive aspects of English, factors not included in transcribed text data are also critically important as mentioned above.

In spoken English research, for example, pragmatic aspects such as turn-taking patterns between participants in conversations and back-channeling responses between participants are targets of both quantitative and qualitative analyses (Carter & McCarthy, 1997; McCarthy, 1998; Evison, 2013). From these dynamic perspectives, verbal factors not included in monomodal corpora, such as speech intonation, rhythm, and volumes, as well as non-verbal factors, such as postures, head gestures, and hand gestures, play significant roles (cf. Adolphs & Carter, 2013). Corpora that include these multichannel inputs are generally called multimodal corpora (Knight, 2011; Tsuchiya, 2013).

So far, there have been visionary projects regarding compilation of

multimodal corpora. For instance, the Nottingham Multimodal Corpus project (cf. Knight & Tennent, 2008), the AMI Meeting Corpus project (McCowan et al., 2005), and the MPII Cooking Composite Activities Video Corpus project (cf. Rohrbach et al., 2012) have been publicized. These corpora usually combine transcribed data of spoken words and various contextual information mainly obtained from video-recorded data, allowing researchers to analyze dynamic relationships between spoken languages and contextual factors such as human motions, gestures, and other related environmental elements such as objects in the situated room.

However, reflecting the fact that research in multimodal corpora is relatively new in corpus linguistics, learner multimodal corpora are still rare. Tsuchiya (2013) conducted one related study, extensively examining video-recorded data of academic supervising sessions between British supervisors and British and Japanese post-graduate students at a British university. The analyses focused on pragmatic factors such as turn-taking patterns, head nods, and hand-gesture patterns, as well as participants' verbal interactions, by using a methodology of time-aligned multimodal corpus analysis.

In Tsuchiya (2013; Chapters 4–7), four one-to-one academic supervising sessions were compared. The four sessions included two "British tutor–British student" sessions and two "British tutor–Japanese student" sessions. From the raw data, the same amount of time data (39 minutes) was extracted for the multimodal

database. According to gesture analyses in Tsuchiya (2013; Chapter 7), listenership behavior may have differed between the British and the Japanese students: one of the Japanese students showed a significantly larger number of head nods than the British students. This reveals a potential cross-cultural difference in listenership behavior. Although the Japanese student outputs a relatively small number of speech tokens, he might have been using a different strategy to show his participation in the conversation. As these results have shown, multimodal corpora analyses can provide information about communicative strategies in human interactions.

Since Japan is a typical EFL country, English oral communication is difficult to teach and learn due to the lack of an authentic environment for practice (cf. Koike et al., 2010; Fuyuno, 2013). Especially, public speaking is one of the most difficult areas to teach and learn in such environment. However, the ability to deliver effective presentations and speeches is considered an important professional skill in modern society as previously noted. Public speaking skills can influence the outcome in various situations, such as professional meetings, conferences and job interviews. Nevertheless, few people possess inherent public speaking skills and it takes practice and training for most people.

Multimodal corpus analysis represents a possible way of improving EFL/ESL approaches. Indexes to set criteria for effective training and practice could be

developed by analyzing multiple factors in public speaking performance data. In fact, Jewett et al. (2016) discuss the importance of analyzing whole context in an interaction such as participants' gaze, postures, and gestures to capture the meaning constructed to be meaningful by the participants. If analysis of public speaking performance from a perspective of multimodality, it will be useful information for EFL learners.

Recent technological developments have affected learner-corpus research and resulted in multimodal learner corpora, such as those developed by the International Corpus Network of Asian Learners of English (ICNALE) project and the Kyushu University Multimodal Corpus Analysis Project (KUMA Project). Learner-based multimodal corpora can store authentic audio and video data of learner speeches, which enables quantitative analysis of phonological and motion features. However, few studies have focused on public speaking.

Thus, for future pedagogical reference, this study analyzes multimodal data of English public speaking by Japanese EFL learners, focusing on the following aspects of learner public speaking data:

RQ 1: What are the characteristics of pause insertion patterns in effective public speeches, especially in terms of their relationship with spoken contents?

RQ 2: What are the characteristics of eye contact patterns in effective public speeches?

RQ3: What factors are likely to affect the evaluation of the overall impression?

These items were chosen for analyses because they were expected to be parts of determining factors for effective public speaking performances; however, they have hitherto been insufficiently investigated, as mentioned previously.

For example, many textbooks on public speaking explain the advantages of eye contact (here, change of facial direction), and they advise readers to make "effective" eye contact with their audiences rather than look at their notes. However, the explanation of effective eye contact often remains unspecified in practical terms. For another instance, Jaffe (2012) suggested that public speakers should look in at least three directions: at the audience in front, to the left, and to the right. Griffin's (2011) explanation is similar to Jaffe's: according to Griffin, speakers should look at more than one person in the audience to make effective eye contact. However, a question is posed as follows: how often and how much should we do that? Livingston (2010) admitted that good eye contact is difficult to define because it is a learned behavior and may differ culturally. Nevertheless, learners need this skill.

Therefore, to examine these factors objectively, we collected and analyzed

audio and video recorded data from an official English recitation contest held by a Japanese senior high school. Using acoustic analysis software and computer vision-based motion capturing, data were examined with acoustic and movement analysis.

Detailed analysis methods will be described later for each analysis. With regard to speech elements, in the field of phonetics and psychology, the physical characteristics of speech rate and pause duration have been gradually clarified (Kendall, 2013; Fuyuno, Yamashita, & Nakajima, 2016). However, from the viewpoint of EFL pedagogy, there have been very few studies on pauses that are suitable for public speaking, in other words, pauses that make the delivered contents more easily understandable. Moreover, such studies provide no guidance on how to teach such pause techniques. This study analyzes the speech pause patterns, specifically from the viewpoint of their relation with the contents of utterance.

With respect to motion factors, research that physically analyzes eye contact behavior with video data from a standpoint of EFL education has been rare in the past. Therefore, this study analyzes the relation between the features of the face direction in eye contact movement and the content of utterance and extracts useful information for future teaching.

The subsequent parts of this paper are structured as follows. Section 4.3. provides an overview of the data collection. The method of data analyses and results

follow in Section 4.4. Section 4.5 contains a concluding summary of the chapter.

4.3. Data and Method

4.3.1. Data

In Chapter 3, data were extracted from BNC, an existing large-scale corpus; however, no corpora have previously been compiled for public speaking, except the ones collected by the author. Admittedly, there is a corpus that includes records of university lectures such as BASE and MICASE, and lectures can be considered as a type of public speaking. However, this study aims to analyze performance presented in an authentic public speaking environment under certain stable conditions such as the size of the audience and the speech environment. Therefore, our original multimodal corpus was produced with data that were recorded to match the conditions.

Data were recorded during an annual official recitation and speech contest held by a Japanese public high school in an authentic public speaking setting with a stage, podium and audience. The contest included both recitation and speech performances. To compare data under equal conditions, only datasets from the recitation were extracted for analysis.

Nine Japanese contestants, all English majors, participated in the recitation part. The participants were offered three types of recitation assignments, and each

contestant selected one assignment prior to their performance¹⁰. After preparation and rehearsal, the contestants performed English recitations in front of the official contest judges and an audience of more than 100 people.

The team of judges evaluated each performance using an evaluation sheet. The judges were three Japanese English teachers and two NSEs teachers; all were qualified EFL teachers and had English teaching experience in Japanese secondary schools. The evaluation sheet listed the nine evaluation items shown in Table 4.1. Each judge scored each performance manually. Then, the scores were collected and entered into a database. As the focus of our analysis is speech pause insertion patterns and facial movement patterns for eye contact, the scores for 'Rhythm', 'Speech Delivery' and 'Eye Contact' were extracted from the database and averaged. The two evaluation items for phonological analysis, i.e. 'Rhythm' and 'Speech Delivery', were chosen because speech rhythms and flows in delivery largely depend on pause patterns.

Table 4.1. List of evaluation items

Item	Full Score (Each Judge)	Description
Pronunciation	10	pronunciation
Intonation	10	intonation
Rhythm	10	speech rhythm
Speech Delivery	10	delivery / flow / pace
Volume	10	volume of voice
Gestures	10	gestures
Eye Contact	10	eye contact
Emotion	10	emotion / energy / passion
Memorization	20	memorization of assignment

The contest performances were audio- and video-recorded using a digital sound recorder (TEAC, DR-07) and a digital video camera (JVC, GZ-R70). The digital sound recorder was set at 44.1-kHz sampling and 16-bit linear quantization, and the video camera had a resolution of 854×480 pixels. The devices were set on stable tripods (Fig. 4.1). After recording, the digital data were extracted and stored in a database (Fig. 4.2).

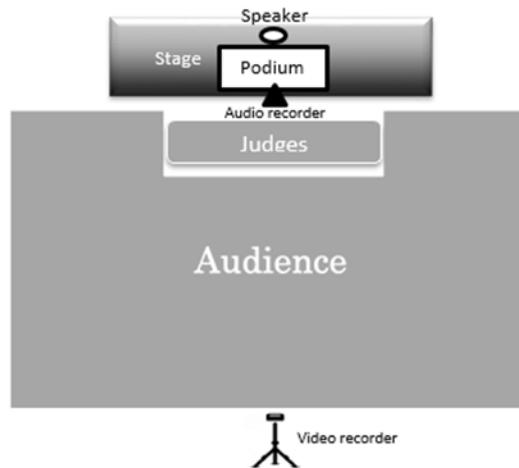


Figure 4.1. Arrangement for data recording

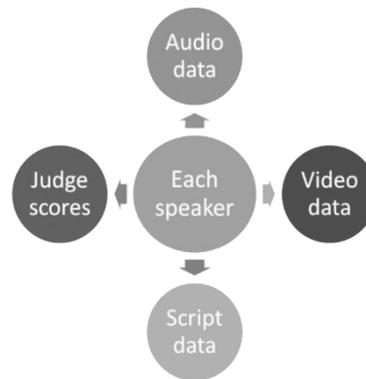


Figure 4.2. Datasets in our multimodal corpus

The basic descriptions of the datasets are summarized in Table 4.2. The average performance duration was approximately four minutes.

Table 4.2. Basic description of the data

Speaker (Anonymized)	Script Type	Average Score (Rhythm and Delivery) /100	Average Score (Eye Contact) /100
S-01	A	59	68
S-02	C	65	60
S-03	A	63	60
S-04	C	80	88
S-05	A	73	74
S-06	B	89	92
S-07	A	65	78
S-08	C	74	64
S-09	A	68	70

4.3.2. Method: Pause Insertion Patterns

Pause insertion patterns in public speaking can be described by various elements, such as pause duration, pause frequency, and the location of pauses. To analyze pause insertion patterns in terms of spoken content, criteria that describe such patterns are required.

In corpus analysis of natural utterances (e.g. free conversations between adult participants talking in their first language), basic exchanges are thought to consist of speech information units. Different ideas about speech units have been used in human communication studies; however, one of the most widely shared notions about speech units is the Intonation Unit (IU), which was suggested by

Chafe (1987). An IU is a linguistic expression of information within utterances, and it plays the role of making speaker-listener communication smooth. An IU is normally defined as a single intonation contour in speech, but it is also typically separated by pauses. Therefore, this notion is applicable when considering speech pause insertion patterns and spoken content.

The IU is largely used in analysis and annotations of natural utterances. However, how can we define 'good pauses' in public speaking that differ from pauses in natural and spontaneous conversations? As mentioned previously, human utterances usually consist of speech units separated by pauses for smooth speaker-listener communication. In this sense, good pauses in public speaking may mark speech units that are semantically meaningful chunks in order to convey meaning clearly to the audience. Croft (1995) pointed out that nearly all IUs are also grammatical units, such as clauses or phrases. Because public speaking involves preparation and is intended to be more carefully delivered than natural utterances, 'good pauses' in effective public speaking may stably mark speech units that are semantically meaningful chunks.

Based on the hypothesis that high-scoring speakers may have more meaningful chunks in their speech units, the audio data were analyzed using acoustic analysis software (Praat). First, randomly chosen 60-s pieces of audio data from the dataset of each speaker were extracted. Pauses were extracted

automatically using the software. For this process, pauses were defined as speech intervals longer than 0.2 s (cf. Kendall, 2013). Next, each speech unit separated by pauses was annotated with spoken script. Figure 3 shows a screenshot of the Praat work screen.

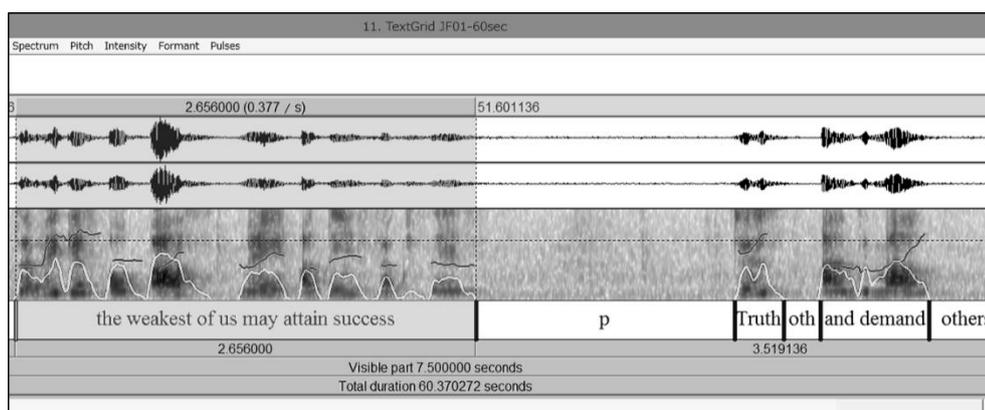


Figure 4.3. Screenshot of automatic pause extraction and speech annotation using Praat

Figure 4.4 shows examples of the annotated data of two speakers. The black dots represent speech units and the white dots represent pauses. The sequences (A) and (B) show the two speakers' results, respectively.

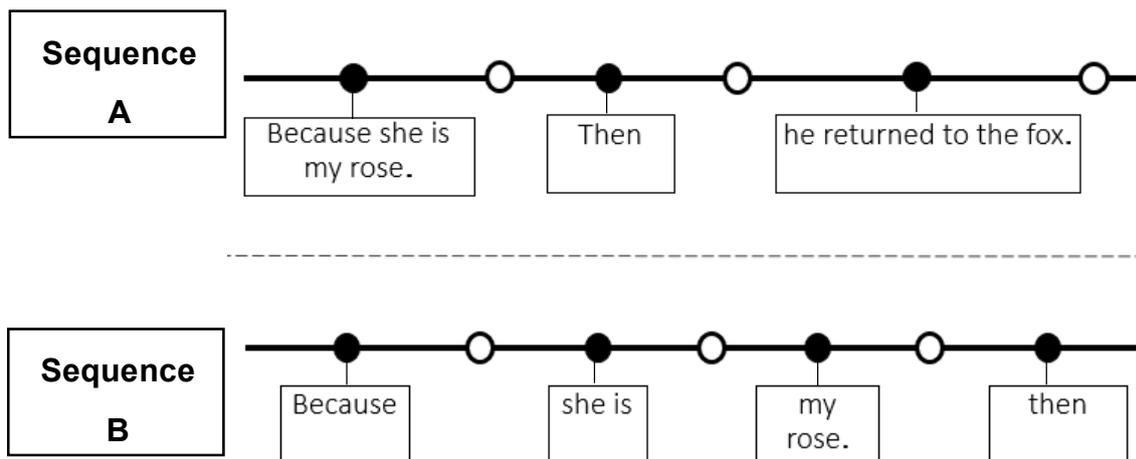


Figure 4.4. Examples of annotated data

After automatic pause separation and annotation, the speech units without clauses or punctuation in all speaker data were counted. We refer to such units as semantically incomplete units. For example, in the data of the two speakers shown in Figure 4.5, the speech units indicated by thick rectangles are semantically incomplete because they do not include clauses or punctuation.

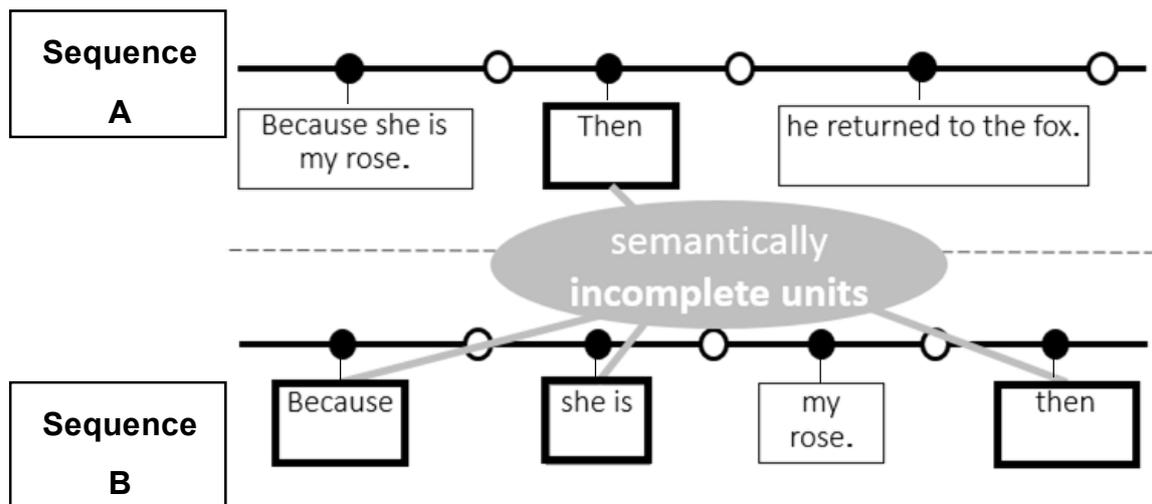


Figure 4.5. Examples of semantically incomplete units

Finally, the ratio of incomplete units to all speech units was calculated for all speakers. The results are discussed in Section 4.4.1.

4.3.3. Method: Eye Contact Movement Patterns

To analyze the speakers' facial motion patterns, motion capturing was performed with a CV-based original program for each speaker's video data. The program is based on the active appearance model (AAM) (Cootes et al., 2001). This method allowed us to track pre-set feature points objectively and automatically (cf. Adolphs & Carter, 2013; Fuyuno et al., 2016; Komiya et al., 2016). Forty-two feature points were set on each speaker's facial parts, i.e. jawline, eyebrows, eyes, nose and lips, as shown in Figure 4.6.



Figure 4.6. Locations of feature points

The speakers' facial motions, including face roll degrees, were extracted as a series of numerical values by tracking these feature points automatically¹¹. In this study, we focused on the speaker's facial roll frequencies and degrees rolled because these directly relate to eye contact movement. Figure 4.7 shows a sample motion tracking result. The speaker's face roll movement tracks to the right and left sides were obtained by the illustrated process.

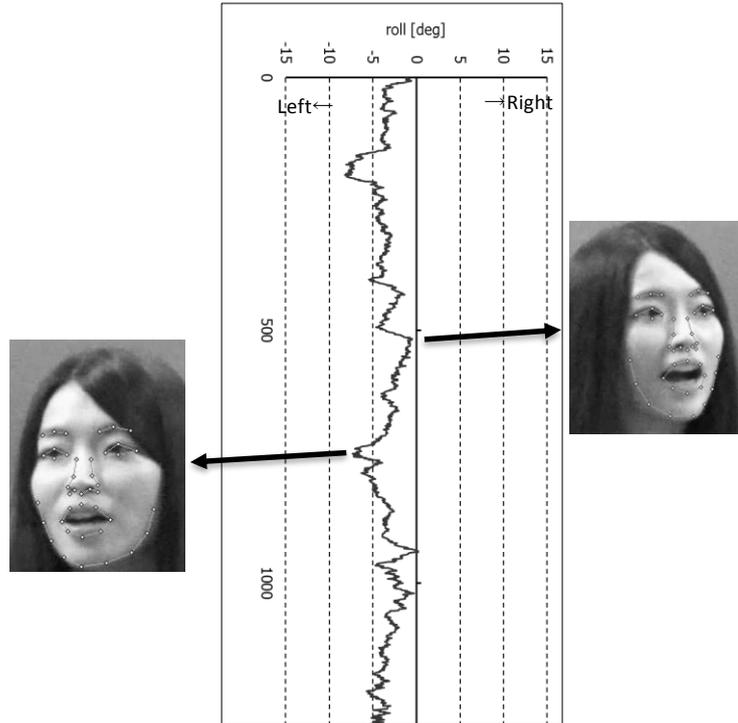


Figure 4.7. Sample motion tracking results of face roll movement

The Fourier transform and power spectrum were calculated from the motion track data. Based on the maximum frequency in each dataset, the speakers' face roll frequencies per minute were obtained. The results are discussed in Section 4.4.2.

4.4. Results and Discussion

4.4.1. Result: Pause Insertion Patterns

Based on the analysis of pause insertion patterns in the audio data, the ratios of semantically incomplete units to all speech units were obtained, as shown in Table 4.3, which lists the results in order of average score (high to low). It seems that

speakers with high evaluation scores for their speech rhythms demonstrate a relatively lower incomplete unit ratio.

Table 4.3. Results of incomplete unit ratio (by score rank order)

Rank	Speaker	Script Type	Average Score (Rhythm and Delivery) /100	Incomplete Unit Ratio (%)
1	S-06	B	89	18.5
2	S-04	C	80	13.6
3	S-08	C	74	19.2
4	S-05	A	73	21.7
5	S-09	A	68	24.0
6	S-02	C	65	24.1
6	S-07	A	65	20.8
8	S-03	A	63	27.2
9	S-01	A	59	29.6

To compare the results of the Japanese learners to those of NSEs samples, two NSEs datasets were recorded. Two speakers were handed a speech script (the content was the same as assignment C¹⁰). The speakers had five minutes to read the script and practice. After preparation, the speakers performed the speeches in front of an audience of three people. The speeches were recorded with the same recording device used for compilation of the multimodal corpus. The results of the NSEs samples are shown in Table 4.4. The incomplete unit ratios in the NSEs sample

data, i.e. the ratios of incomplete units in all speech units, were both quite low, and they are considered lower than the normal utterances of NSEs (cf. Chafe, 1993). This reflects the fact that public speaking speech is the result of certain preparations and that the speech script itself is pre-written and revised for speaking. The results indicate that fluency in public speaking performance and incomplete unit ratio are related to an extent.

Table 4.4. Incomplete unit ratio of NSEs samples

Speaker	Script Type	Incomplete Unit Ratio (%)
NSE-01	C	0
NSE-02	C	7.7

Using the results shown in Table 4.3, Spearman's rank-order correlation coefficients were computed by comparing the scores and the incomplete unit ratios. The results of the correlation confirmed a strong negative correlation ($r = -.91$). It was confirmed significant ($P < .01$). Figure 4.8 shows the correlation between the scores and the incomplete unit ratios.

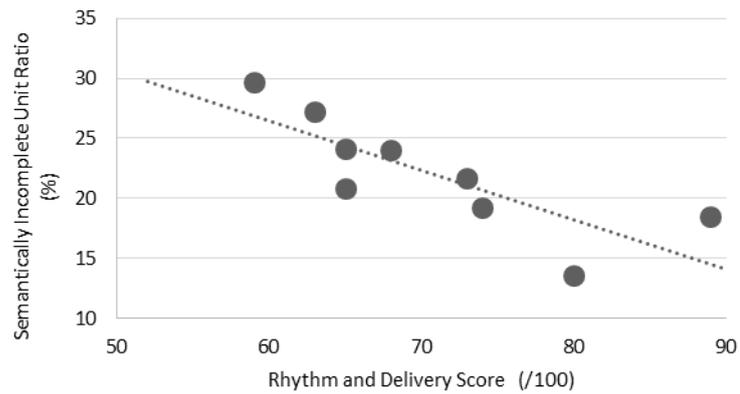


Figure 4.8. Correlation between Rhythm and Delivery scores and semantically incomplete unit ratios

The results suggest that speakers with high evaluation scores for speech rhythms tend to pause at semantic boundaries, i.e. between clausal units. In contrast, other speakers tend to pause at boundaries without clauses. Several possibilities could explain this tendency: (1) speakers are not sufficiently fluent (e.g. memorization of the script and/or practice was insufficient); (2) speakers emphasize the meaning of words by placing pauses around them intentionally; or (3) speakers do not pay attention to semantic units in the speech script. Regarding the second point, the two sequences shown in Figure 4.5 indicate this pattern. Sequence A in Figure 4.5 is from the results of a speaker with a high score, and sequence B is from a relatively lower scoring speaker. The speaker of sequence B appeared to place pauses after 'because' and 'she is' intentionally to emphasise the sentence dramatically.

Considering the above results, it is noticeable that the speech scripts may have important rolls in speech rhythm. In Table 4.3., two out of three top speakers recited assignment C. In fact, among the three types of assignments, average sentence length was the shortest in C (10.38 words per sentence(wps)). Compared to A (17.60 wps) and B (15.65 wps), the simpler sentences in C may have been more suitable in deciding where to pause/emphasize for learners, since the sentence lengths are also related to number of syllables and number of accented words.

In Japanese ELT classrooms, speech and presentation are often taught with writing, and sometimes students just use their written essays as scripts for speech/presentation performance. However, when speakers prepare speech scripts for themselves, it would be necessary to teach them the importance of preparing scripts in consideration of sentence length and rhythm to make the scripts suitable for spoken communication.

In summary, speakers with high evaluations tend to pause speech at semantic boundaries, such as punctuation marks and between clausal units, while other speakers made speech pauses that marked semantically incomplete units. Thus, the incomplete unit ratio to the total speech units of a public speaker can be considered an objective index to assess performance.

4.4.2. Results: Eye Contact Movement Patterns

From the motion tracking results, face roll frequency per minute and face roll degree for each speaker were obtained as shown in Tables 4.5. Both categories were sorted in order of average score for eye contact (high to low).

Table 4.5. Results of average face roll degrees and face roll frequency per minute (by score rank order)

Rank	Speaker	Average Score (Eye Contact) /100	Face Roll Frequency per Minute	Average Face Roll Degree (to one side)
1	S-06	92	7	5.20
2	S-04	88	8	5.46
3	S-07	78	9	3.24
4	S-05	74	15	2.13
5	S-09	70	7	2.02
6	S-01	68	22	1.57
7	S-08	64	4	4.91
8	S-02	60	7	2.73
8	S-03	60	7	3.75

The results of face roll frequency per minute show how many times a speaker changed face roll direction (to the right or left) on average in one minute. As can be seen in Table 4.5, the frequencies of the top three speakers indicate similar numbers; they changed face roll direction eight times per minute on average (i.e. once every seven seconds). Compared to these three, the lower ranked two

speakers (i.e. S-05 and S-01) changed face direction more frequently. These may have been considered too frequent, thereby resulting in a negative impression, as reflected by the evaluation scores. An F-test was performed to compare the difference in variances between the top three speakers and other speakers. The results indicate a significant difference ($F(5, 2) = 46.2, p < .05$). However, the two lowest scoring speakers (i.e. S-02 and S-03) showed frequencies similar to the top three speakers. Why would this happen?

The answer seems to lie in the actual amount of speaker movement. If a speaker rolled their face to larger degrees, the speaker could make eye contact with a wider audience to both the right and left edges. The average face roll degrees shown in Table 6 indicate that the top three speakers tended to move their faces at greater degrees. In fact, the average face roll degrees of the top three speakers were greater than those of the other speakers (top three: 4.63; others: 2.85). There was a marginal significant difference in the degrees for the top three speakers ($SD=0.99$) and the others ($SD=1.14$) in a two-tailed t-test; $t(7)=2.02; p=0.08$. Figure 4.9 illustrates box-and-whisker plots of the comparison.

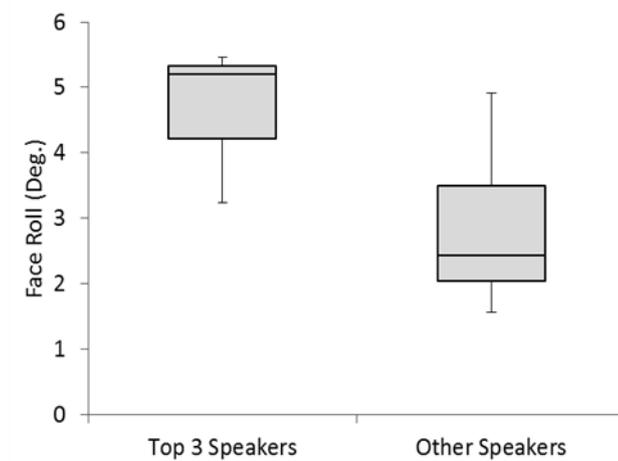


Figure 4.9. Box-plots of the face roll degrees of the top three speakers and the others

The results of the motion track graphs describe these differences clearly. The graphs of two speakers were extracted from the results as an example. In Figure 4.10, the graph on the left shows the face roll motion track of S-04 (evaluation score = 88/100) and the graph on the right shows the face roll motion track for S-02 (evaluation score = 60/100).

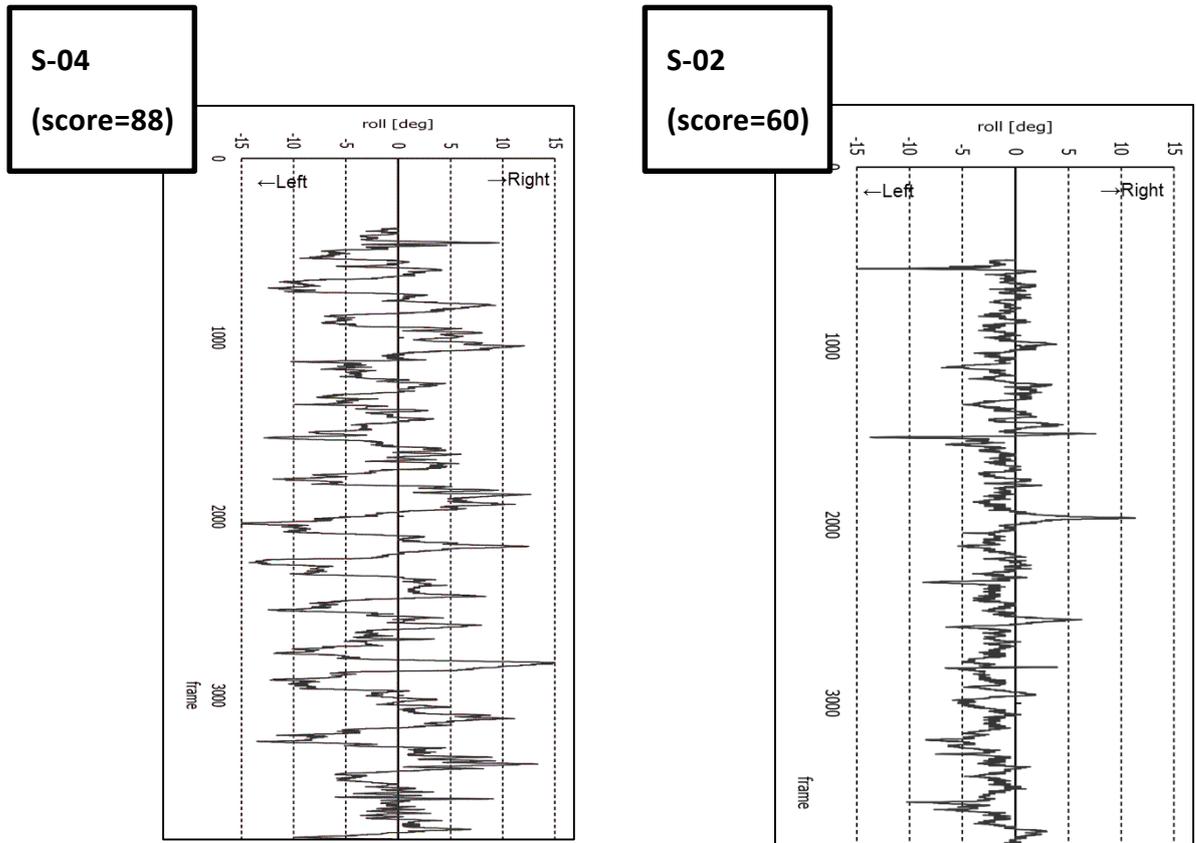


Figure 4.10. Examples of motion track results

As can be observed in the graphs, S-04 rolled his/her face more dynamically to both sides. In fact, the average coverage to the two sides was 13.4 degrees for S-04 and 8.96 for S-02. To maintain eye contact with a wide range of the audience, speakers may need to move their faces to wider degrees rather than simply moving their eyes.

Figure 4.11 shows a scatter plot of the average face roll frequencies and degrees.

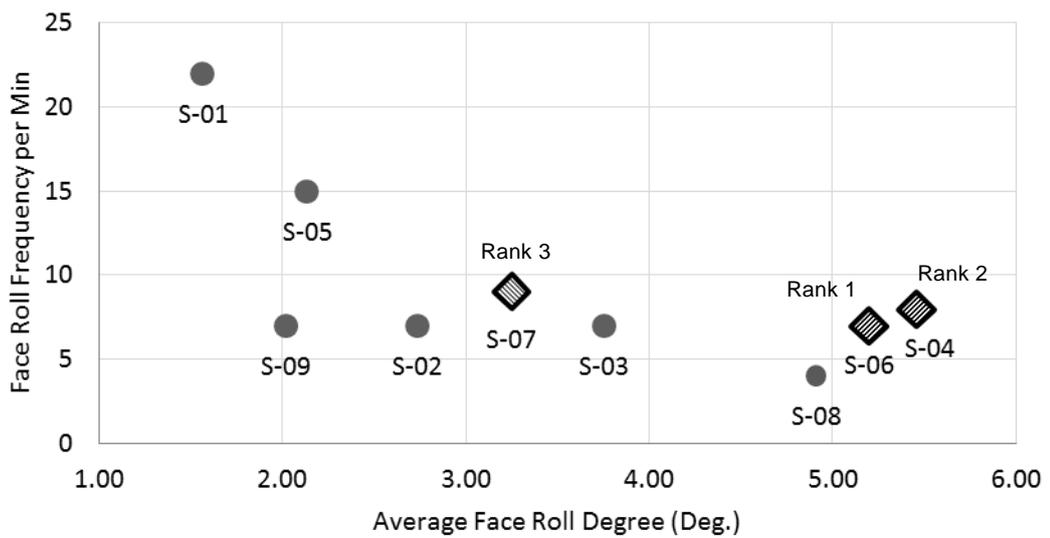


Figure 4.11. Scatter plot of face roll frequencies and face roll degrees

As can be seen, the top two speakers, i.e. S-06 and S-04, are plotted in the same area. A tendency for effective facial movement to maintain eye contact can be observed from these results. The top two speakers show larger face roll degrees compared to the other speakers, with a frequency of approximately eight times per minute. These results demonstrate an example of adequate eye contact movement for EFL learners.

4.4.3. Further Analysis

As described above, up to the section 4.4.2, the relation between the evaluation scores and the patterns of vocal poses and face movement for eye contact has been discussed. Speakers who were highly evaluated shared common

features with regard to these factors. However, in the analysis so far, individual scores corresponding to each evaluation item were used to analyze the voice pause patterns and eye contact motion patterns according to the purpose of each analysis. A question arises as follows: how do these vocal and motion elements affect the overall evaluation of the performance? Such discussion is considered to be useful in developing a curriculum and priority of guidance for teaching public speaking.

Therefore, this section explores the relation between the overall evaluation of the performance and elements of vocal and movement features by conducting multiple regression analysis. The analysis uses the overall evaluation score as the dependent variable and multiple factors related to the vocal pause patterns and the face direction motion patterns as explanatory variables.

Multiple regression analysis is a type of multivariate statistical analysis that calculates a weight that can most efficiently predict the value of external reference variables when there are multiple explanatory variables for a certain variable (Kano & Miura, 2002). In the calculation, internal correlations between each variable are considered. This method is popularly used for analysis in various fields such as business administration, psychology, acoustics, medicine, and physics. This study uses the averaged total evaluation score as the dependent variable and multiple elements from vocal and movement factors as explanatory variables to examine the influence of vocal and movement elements on the overall evaluation of public

speaking performance.

An arbitrary number of explanatory variables can be used for multiple regression analysis depending on the purpose of analysis. In cases where the tendency of variables has not been established in previous research, the analysis will be inherently exploratory. Because no previous research has conducted multiple regression analysis of the comprehensive evaluation of public speaking, we need to consider possible variables from the beginning. As a basis of future research, this study uses two factors each from sound and motion elements. Furthermore, by using factors that show only physical features and factors related to both physical features and contents of utterance, we checked whether the influence of these factors on the evaluation is likely to be significant. Based on the above, the RQ for this section is as follows:

RQ. Which factor is (or factors are) responsible for the overall evaluation of the speech?

4.4.3.1. Data and Method

This study focuses on pause patterns and eye contact motion patterns among the main elements in the delivery of public speaking; we thus examine how these factors affect the overall evaluation. First, we used the average

comprehensive evaluation score for each speaker as the dependent variable (Table 4.6). In the preceding sections, the individual evaluation score for each delivery item was used, as each of the pause patterns and the eye contact motion patterns was the subject of analysis respectively. However, in this section, the purpose of analysis is to investigate which element has the greatest influence on the overall evaluation. Therefore, the overall evaluation score was selected as the dependent variable.

Table 4.6. Average scores for overall evaluation

speaker	Average score (overall) /100
S-01	63.4
S-02	66.4
S-03	61.2
S-04	87.6
S-05	75.8
S-06	91
S-07	71.6
S-08	76
S-09	70

As elements of the voice pause patterns, the explanatory variables are the incomplete unit ratio (Table 4.3) mentioned in Section 4.3.2 and the average length

of each section of speakers' utterance sandwiched between sound pauses. Hereafter, this element will be called "speech unit duration" (Table 4.7); it was chosen as an element to show the physical characteristics of speakers' pause patterns.

In the evaluation of public speaking, judges have to evaluate each performance by observing sound elements and action elements in addition to judging the appropriateness of the uttered contents. For example, when evaluating speech, various factors can be considered, such as whether the pronunciation is appropriate, whether the speed facilitates understanding, and whether the section of the utterance has comprehensible contents. Because this study's purpose is to analyze useful information for teaching public speaking to EFL speakers, we prioritized an element that has not been taught sufficiently in the field to date, namely, the balance of duration of speech units. Furthermore, by using the two factors, we can compare the effects of purely physical characteristics with those of vocal elements that are related to grammatical characteristics. To examine whether each of these factors affects comprehensive evaluation, they were chosen as explanatory variables.

Table 4.7. Average speech unit duration and average face-direction degrees of each speaker (by score rank order)

Speaker	Average score (overall) /100	Average speech unit duration (s)	Average face-direction degrees (deg.)
S-06	91	1.299310	4.72
S-04	87.6	1.519924	6.70
S-08	76	1.468587	6.32
S-05	75.8	1.649256	2.02
S-07	71.6	1.537747	4.91
S-09	70	1.252086	2.28
S-02	66.4	1.179956	4.48
S-01	63.4	1.368592	2.00
S-03	61.2	1.678338	4.31

As an element of the eye contact motion pattern, speakers' face direction range angles were averaged and extracted (Table 4.7). To achieve this, a list of peak values for each speaker's face orientation range angle was extracted from the motion tracking data, and the ranges of the angles were calculated. These data indicate the physical characteristics of the eye contact movement. Furthermore, we checked the contents of the utterance during the changes in face orientation and clarified the contents uttered during each face orientation to investigate a factor related to the content of the utterance. As speakers with higher proficiencies had a more stable rhythm in terms of face direction (cf. Figs. 4.10 and 4.11), we

hypothesized that the amount of spoken content might also be stable in rhythms of face directions. Furthermore, similar to the two elements of the speech factor, two kinds of elements for the moving factor were used: one is purely physical, and the other is related to spoken contents.

Table 4.8. Example of word count process (An initial part of the data for S-01)

Utterance at the moment of change of facial direction	Utterance in meantime	Number of words in meantime	Number of words at the moment of change of facial direction
You are	not at all like my rose. You are nothing to her, he said to the roses. no one has tamed you, and you have never tamed anyone. My fox was	30	2
once	like you. He was once a fox just like	9	1
thousands	of other foxes. But I made him my friend, and now there is no one like	16	1
him	in all the world. The	5	1
roses	were not pleased.	3	1

As shown in Table 4.8, first, the number of uttered words in each meantime was investigated for each speaker. Next, the coefficient of variation was calculated for each speaker to investigate the variation in the number of spoken words. The

following result was obtained (Table 4.9). The results were used as an explanatory variable.

Table 4.9. Coefficient of variation: Word counts in meantime

Speaker	Coefficient of Variation
S-01	0.888868
S-02	0.949511
S-03	1.074061
S-04	0.891803
S-05	0.799682
S-06	0.791493
S-07	0.811454
S-08	0.746542
S-09	1.242982

Using the above four variables as explanatory variables, multiple regression analysis was conducted.

4.4.3.2. Results

Multiple regression analysis was performed using IBM SPSS ver. 22.0 Statistics Base. The dependent variable was the average comprehensive evaluation score for each speaker. Four elements were used as explanatory variables: the incomplete unit

ratio for each speaker (Table 4.3), the average speech unit duration of each speaker (Table 4.7), average face-direction degrees of each speaker (Table 4.7), and the coefficient of variation of the number of spoken words during the face orientation motion (Table 4.9). Table 4.10 shows the results.

Table 4.10. Result of multiple regression analysis

Explanatory variables	β	p
Average speech unit duration	-.160	.445
Incomplete unit ratio	-1.51	.017*
Average face-direction degrees	-.320	.288
Word count variation in face direction meantime	-.178	.442
R^2	.867*	
$Adj.R^2$.734*	
N	9	

β : Standard partial regression coefficient, p : p value

*: $p < .05$

Adjusted R^2 is as high as .734, indicating the appropriateness of the regression model. The above results show that the contribution rate is the highest with the incomplete unit ratio, which indicates the rate of sound pause insertion at inappropriate positions. Furthermore, a significant regression coefficient can also be

observed in the incomplete unit ratio. Regarding our RQ, the incomplete unit ratio may impact the overall evaluation of public speaking performance.

Among the four explanatory variables, the incomplete unit ratio is characterized by the fact that the speech element and the utterance contents are related elements. Furthermore, the variation in the number of spoken words during a facial direction movement was not a significant factor among the four elements although it was related to uttered contents such as the incomplete unit ratio. From these results, it is suggested that the overall evaluation of public speaking may be affected when an oral delivery element is related to the content of utterance, especially the units of a grammatical structure.

As a prospect for future research, more factors could be examined in a similar manner, using multiple regression analysis to find crucial factors in the evaluation of public speaking. Such analysis is expected to provide useful information for the pedagogy of public speaking, especially in the phase of curricula development.

4.5. Summary

In this study, pause insertion patterns and face movement patterns in EFL learners' public speaking have been analyzed using data from a multimodal corpus. The results of cross-analyses between pause insertion patterns and performance

evaluation scores and between facial movement patterns and performance evaluation scores indicated that highly evaluated public speakers demonstrate similar tendencies. The tendencies are expected to be used as evidence-based examples for teaching public speaking in English and performance assessment, especially with a fact that the tendencies can be defined with concrete numerical data by quantitative approach. If more speakers' data are examined and the tendencies are generalized, the information will be valuable for efficient teaching and learning.

Our quantitative analysis results suggest various future research prospects. First, there were connections between speech content and speech pauses and a strong correlation between these and speech evaluations in our data. The timing of speech pauses seems to be crucial in determining the quality of public speaking. However, in addition to the speech voice and spoken content, other behavioral factors such as eye contact, hand gestures, and facial expressions simultaneously interact in public speaking. In future studies, the relations among all other phonological, content-related, and behavioral factors should be examined.

In addition, this study has focused on eye contact facial movement using movement analysis. Different types of motion factors, e.g., eye movement, hand gestures, and postures, could provide useful clues for pedagogical application. In fact, high-scoring speakers in our multimodal corpora were observed to use these

factors effectively. Methods of handling and analyzing the corpus data to elucidate the characteristics of such factors will be the subject of future studies.

Chapter 5. Concluding Remarks

5.1. Summary of the Thesis

In this thesis, we discussed the expansion and effectiveness of the evidence-based approach for Japanese EFL learners and developed a method of analysis to investigate this approach, using spoken language data and multimodal corpus data.

Initially, as a basis for discussion, we analyzed the real needs for English skills, targeting Japanese businesspeople who had been educated in Japan. In Japan, the communicative approach has been implemented since the 1980s, and school education has gradually shifted to education that places a greater emphasis on context compared with that in previous periods. However, the influence of washback effects from the standard university entrance examination still exists, resulting in a focus on grammar construction in school classrooms. The results of the needs analysis showed the need for more examples based on the actual context and usage and speaking skills education that involves daily conversation and speech. In particular, public speaking education, such as giving presentations and speeches, dominated the skills that the participants wanted to expand. This suggests that these skills are not currently taught sufficiently in Japanese schools.

The results of the needs analysis indicated that the English examples used in school education in Japan do not conform to practical contexts and usages. Therefore, in Chapter 3, we examined whether examples taught in Japanese school

English education are authentic. To investigate the issue, psy-passives were used as the target of analysis. When passives with psychological verbs are taught in Japanese school English education, they are generally introduced as set phrases together with a specific preposition. After usage data for NSEs and Japanese EFL learners were collected, correspondence analysis was performed to examine the connections between the psychological verbs and the prepositions.

As a result, the usage by Japanese EFL learners showed a strong influence from rote-learning. Conversely, the usage by NSEs was relatively flexible regarding the choice of prepositions: specifically, prepositions matching the intention of communication seemed to be selected according to the context. Furthermore, using spoken language corpus data that has not previously been emphasized in ELT in Japan, different discourse functions of psychological passive sentences were noted in written and spoken English. For instance, in spoken English, this construction is often used for contextual commenting. This characteristic was shown in the significantly higher number of full-stop endings in spoken data than in written data. It was also confirmed that sets taught in Japanese textbooks are observed in written data. Thus, greater application of spoken English data is recommended to teach communication strategies more effectively.

In Chapter 3, we analyzed both the written language data and spoken language data. Today, however, with the development of technology, nonverbal

factors related to language use, such as gestures and phonological characteristics as well as the semantic contents of the language, can be analyzed through video and sound recorded data. Therefore, in Chapter 4, based on multimodal corpus data including video and speech data, English public speaking performance was analyzed and discussed. Public speaking was another problematic issue, as identified by the needs analysis in Chapter 2. In the analysis and discussion, speech voice factors and eye contact operation were analyzed as research interests.

The analysis results in Chapter 4 suggested that Japanese EFL learners who were highly evaluated by both the NSEs and nonnative English-speaking judges showed similar patterns regarding the feature of pause insertions and the face directions in eye contact. Speakers who received high evaluations tended to make pauses at points that do not break semantic cohesion (between clauses, sentences, etc.), whereas speakers with lower evaluation did not show this tendency. It was also confirmed that the pattern of the highly evaluated speakers is close to that of NSEs.

With regard to the face direction patterns, speakers with high evaluation took eye contacts approximately eight times per minute and at wider degrees. In addition, speakers with high evaluation frequently changed their direction while speaking. In contrast, lower-evaluated speakers changed their facial direction too much or moved their faces at too small degrees. Moreover, speakers with high

evaluation showed smaller variation in the number of speech words in each meantime of facial direction changes.

Finally, in Chapter 4, multiple regression analysis was performed using variables selected from the results of the speech and motion analysis, and the overall evaluation score of each speaker's performance was used as the dependent variable. The results of the multiple regression analysis revealed that the incomplete unit ratio was the variable with the greatest effect on the overall evaluation score. This factor indicates the ratio of pauses that conserve grammatical units; therefore, we can assume that factors related to the conveyance of meaning in utterance may have the most important influence on evaluation.

According to the above results, it can be said that the evaluation of public speaking is influenced by connections between speech voice, contents of utterance, and actions. However, for learners with low proficiency in public speaking, it may be difficult to effectively perform these elements at the same time. Therefore, by teaching these skills based on the physical index of excellent performance that has been clarified in this research, novice learners can obtain a clear target image when practicing. We will discuss the implications and application of these skills in greater depth in section 5.3.

5.2. Advantages and Difficulties of Multimodal Corpus Analysis

In this study, we discussed the importance of using authentic evidence in English education; we also found that spoken language data, which has previously received less attention than written language, is useful for grammar research and English teaching for Japanese EFL learners. Furthermore, we demonstrated that multimodal corpus data that includes motion information from video data can also significantly assist Japanese learners who study in an EFL environment, where opportunities for authentic communication are rare. By conducting analysis using multimodal corpus data, we showed that objective information for teaching delivery can be obtained through multimodal corpora research. In previous periods, factors in speech delivery have tended to be taught through teachers' or textbook writers' subjective description. Using more objective indexes, learners can set their goals clearly.

Multimodal corpora can provide a great deal of evidence to the field of English education, and their benefits are immeasurable. However, in the case of a corpus that includes video data and other behavioral data, the types and amounts of data are likely to be enormous, and analysis can be arduous. For example, in this research, we analyzed public speaking performance by mainly focusing on the speech pause patterns and face direction patterns in eye contact, but many other factors could be the target of analysis: these include elements such as body

movement, posture, voice volume, facial expression, and hand gestures.

To successfully extract the necessary evidence from such complicated data, it is important to use combined statistical methods, such as multivariate analysis, to organize the complex information within the data, and more importantly, to clearly define the purpose of analysis. By doing so, data collection methods can be set properly.

For data analysis using multimodal corpora, it is also crucial to formulate an appropriate analytical method. This process requires cross-disciplinary expansive build-up in many cases. For example, with regard to motion analysis, we succeeded in semi-automatizing the annotation process through motion tracking technology. Reducing the huge amount of manual work that can be involved in the practice of motion analysis was an effective way to incorporate the technology of the image processing field in accordance with the research purpose.

Many types of analysis still require manual annotation: for instance, a problem with multimodal corpora is the enormous amount of work involved in annotating extensive video data. To make the analysis practical, sustainable, and possible, there are various points to consider at the time of corpus data collection and before starting analysis. Especially, when compiling a small corpus, it is important to examine the purpose of the data and to record data under conditions that can actually achieve the purpose.

For example, a major purpose of this research was to obtain useful information for the provision of English education to Japanese EFL learners. Therefore, we chose an approach that was tailored to the purpose in the corpus production and in the analysis process; otherwise, the recorded data could have been useless in the process of analysis. For instance, when analyzing face direction using the motion tracking method, it is necessary to fix the camera position (so that there is no deviation, even in units of millimetre), to keep the camera's lighting and resolution settings high and constant at all times for all speakers, and to ensure that the speaker always faces the camera in the same direction when standing at the same position. It is inevitable that an analysis is regarded as exploratory if it has not been pursued in previous research. However, by examining the method carefully in advance, we can appropriately set the necessary conditions for data collection.

5.3. Implications for Future Research

In this study, we obtained new objective indexes for teaching Japanese EFL learners in the future. Based on these data, our future research prospects include the development of teaching material that uses concrete and objective descriptions. In fact, based on the analysis in the previous section, we have been developing teaching manuals and a practice system with virtual reality (VR) technology for

Japanese EFL learners and performing pedagogical experiments upon them.

The manuals specifically teach the ideal amount and length of pauses and key guidance for eye contact, such as its frequency and directions. Figure 5.1 shows a part of the manual prototype. The section instructs students regarding ways to make effective pauses in speech (Fuyuno, Yamada, Yamashita & Nakajima, 2016).

ポーズ

内容を強調したり、より聴きやすくわかりやすいスピーチにしたりするためには、適切な位置で適切なポーズを挟んでいくことが重要です。

スピーチにポーズを入れる際、**ポーズを入れる位置によって、ポーズの長さによりハリ**をつけましょう。

ピリオド（日本語の場合は読点『。』）の位置のポーズを **1.5 秒間**くらいとすると、コンマ（日本語の場合は句点『、』）の位置では **1 秒間**、その他の意味の切れ目などの位置では **0.5 秒**ぐらいのイメージで、長さにメリハリをつけると効果的です。

それぞれのポーズについて、ポーズの長さをスラッシュ（/）の数で表し、スクリプトに書き込むと、以下の例文のようになります。

このように、あらかじめポーズ位置を書き込んでおくと安心です：

The businessman opened his mouth, // but he found nothing / to say in answer. /// He suddenly realized that / there was no hope of being left in peace / until he answered this question. ///

Figure 5.1. An example of the developed manual

Following Fuyuno et al. (2016), we conducted pedagogical experiments using the manual through teaching Japanese EFL learners to practice English and

Japanese speeches. The participants were divided into two groups: the experimental group used the developed manual, and the control group used a traditional manual that had been constructed using explanations from published textbooks. After participating in pre-training speech, the participants practiced speech at home; the duration of practice time was controlled to be identical in both groups. The second speech was made after the training; the result showed that the developed manual was effective in reducing subjective mental stress for English public speaking (Fig. 5.2).

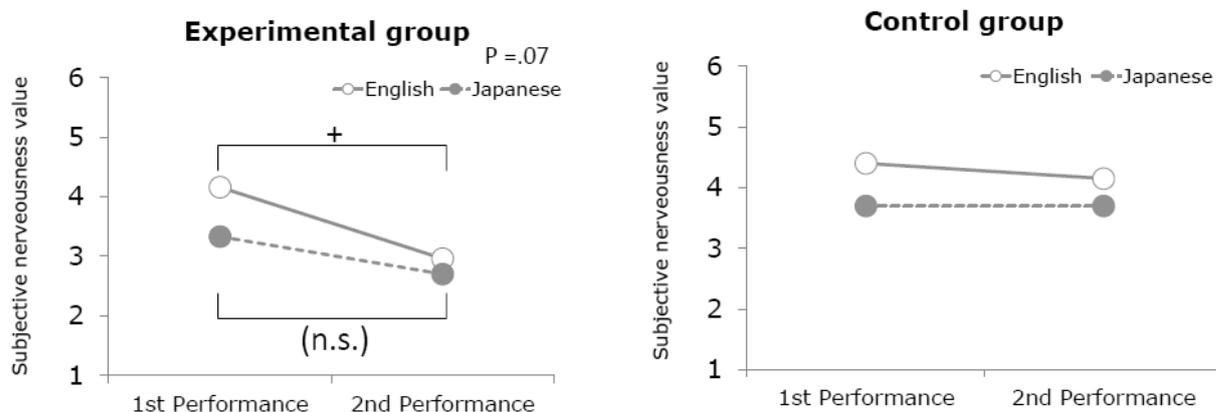


Figure 5.2. Graph of the results

(Fuyuno, Yamada, Yamashita & Nakajima, 2016).

Another future prospect is to develop a practice system that provides an environment wherein learners can self-train themselves to perform public speaking effectively. The VR practice system is based on a computer program that evaluates

user's speech rate and eye contact movement through the indexes studied in this thesis (Fuyuno & Yamada, 2016; Fuyuno, 2017). The system presents a virtual presentation venue and virtual audience on a head-mounted display. The system trains users by giving real-time feedback and indicators to lead ideal eye contact movement. In the program for this function, results of the multimodal corpus study in this thesis are utilized (cf. Section 4.4.2.; Fuyuno et al., 2016); the timings of eye contact performed by highly evaluated speakers are used as models. By providing such teaching materials, we support public speaking exercises, which have traditionally been difficult for individuals to practice. Thus, students will be able to practice alone while experiencing the sense of giving an actual presentation.



Figure 5.3. VR system with head-mounted display

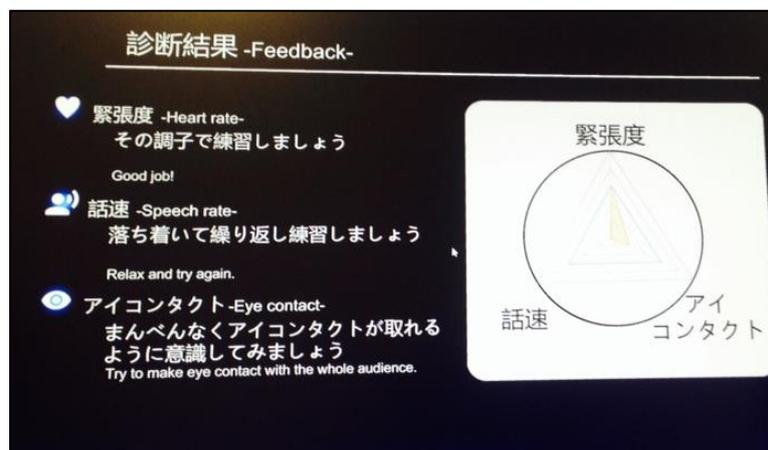


Figure 5.4. Screenshots of user interface in the VR system

Going forward, we plan to install the VR system within teaching and carry out effect verification experiments. Based on concrete evidence, it will become easier to develop teaching materials such as those above; they can assist English learners, especially those in an EFL environment, by providing an increased focus on authenticity. The development of ICT is expected to continue in the future, and new technologies are emerging every day. Utilizing the advantages of these and perpetuating the cycle of extracting useful evidence with the development of

teaching materials and teaching methods, English education can become ever more productive in the EFL environment.

Notes

1. Regarding the use of evidence from language database, not only the EFL but also the field of English as Lingua Franca (ELF) has developed various database and applied the data into English teaching. However, the present thesis focuses on discussions in the scope of EFL, considering situations of English classrooms in Japan where English communication with NSE is still majorly focused (cf. Mimatsu, 2011)
2. The author also conducted a qualitative interview survey with these participants (cf. Fuyuno, 2014b). However, in this thesis, quantitative study and its results will be discussed because these reflect more general tendency than the results of interview study.
3. Most participants corresponded from Thailand, Cambodia, Myanmar, Indonesia, Philippines, and Vietnam. Their occupation fields were Education (21.3%), Maker (17.3%), Service (14.67%), and ICT (10.67%). Asian countries were selected as a target of this study because the Asian region is the most frequent destination of Japanese-affiliated companies. The major regional ratios in the number of Japanese-affiliated companies are as follows: Asia (69.16%), North America (12.84%), Western Europe (8.09%), and Eastern Europe (2.15%).
4. The Japanese EFL Learner Corpus was composed by a team of researchers with Dr. Yukio Tono as their team leader. The concordancer for this corpus was an

online search system by Shogakukan Corpus Network.

5. Nagoya Interlanguage Corpus of English by Sugiura Masatoshi of Nagoya University.
6. Data collected by Professor Kojiro Asao of Ritsumeikan University (2006).
7. The raw frequency data are shown in Appendix 4.
8. The average percentage of cells with data in both spoken and written form was approximately 16%. Thus, the combinations that appeared in more than 20% of cells were regarded as frequent combinations.
9. The average percentage of fullstop endings in both spoken and written data was approximately 39%. Thus, fullstop endings that appeared in more than 40% of cells were considered to be frequent.
10. The three assignments are as follows: (A) an excerpt from "The Principal's Address to the Graduates" by Tsuda Umeko; (B) an excerpt from Haruki Murakami's acceptance speech for the Jerusalem Award; and (C) an excerpt from *The Little Prince* (English translation) by Antoine de Saint-Exupéry. The contents of the assignments are shown in Appendix 5.
11. For more detailed information about the technological descriptions, please refer to the study by Komiya et al. (2016).

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Appendices

Appendix 1. The Sample Contents of Questionnaire in Original Japanese

Version

Table 1. Sample questions in original Japanese

番号	質問内容
1	駐在地において、主にどのような場面で英語をお使いになりますか(なりましたか)。(あてはまるものを全て選んでください)
2	今後、もっと英語運用能力をのばしていきたいと感じる場面はどれですか。(あてはまるものを全て選んでください)
3	駐在地での業務にあたって、「日本で勉強してきたよかった・役に立った」と感じることはなんですか。(あてはまるものを全て選んでください)
4	駐在地での業務にあたって、「日本でもっと勉強してきたほうがよかった」と感じることはなんですか。(あてはまるものを全て選んでください)
5	駐在地でのご経験を踏まえて、日本の大学・専門学校・高校・中学・小学校における英語教育に、もっと取り入れたほうがよいことはどんなことだと思いますか。(あてはまるものを全て選んでください)

Table 2. Samples of Answer Choice Options Provided in the Questionnaire

質問 1 および 2 の選択肢の例	
ビジネスメールを読む	マニュアルを読む
ビジネスメールを書く	マニュアルを書く
会議・打ち合わせで他の人の意見を聴く	スピーチを聴く
会議・打ち合わせで自分の意見を話す	スピーチを行う
電話を受ける	複数の人を相手に交渉する
電話をかける	1人を相手に交渉する
プレゼンテーションを聴く	提案を聴く
プレゼンテーションを行う	企画書を読む
パーティや接待で話をする	企画を書く
パーティや接待で話を聴く	顧客に口頭で提案を行う
報告書を読む	顧客の要望を聴く
報告書を書く	部下や同僚に、指示を口頭で出す
質問 3 および 4 の選択肢の例	
英単語の習得：日常生活用語	日常英会話の練習
英単語の習得：一般ビジネス用語	ビジネス英会話の練習
英単語の習得：専門的な用語	英語スピーチの練習
英文法の習得	英語プレゼンテーションの練習
一般的なリスニングの練習	ビジネス英語のリスニングの練習
一般的なリーディングの練習	現地独特の英語の言い回し
当該ビジネス分野の背景知識	日本の文化・歴史
質問 5 の選択肢の例	
単語力の増強（日常生活用語）	英文書類の書き方
単語力の増強（ビジネス用語）	（企画書、レポート、マニュアル等）
日常生活英語のリーディング練習	英語での電話のかけ方の練習
ビジネス英語のリーディング練習	英語スピーチの練習
日常生活英語のリスニング練習	英語プレゼンテーションの練習
ビジネス英語のリスニング練習	英語での交渉の練習
日常英会話の練習	英文 Eメールの書き方
会議・打ち合わせなどで、英語で意見を 発信する練習	英語で口頭で指示を出す練習

Appendix 2. The Sample Contents of Questionnaire in English Translation

Table. Samples of answer choice options that were provided in the questionnaire

Options for Questions regarding Situations (Questions 1 and 2)	
reading business e-mails writing business e-mails listening to opinions of others in meetings speaking opinions in meetings receiving phone calls making phone calls listening to presentations giving presentations talking in parties and business dinners listening to others in parties and business dinners reading reports	writing reports reading manuals writing manuals listening to speeches giving speeches negotiation with several people negotiation with one person giving business proposals orally doing shopping dining out in restaurants giving instructions orally to other staff
Options for Questions regarding Skills (Questions 3 and 4)	
vocabulary (daily terms) vocabulary (business terms) vocabulary (technical terms) grammar knowledge general reading skills general listening skills Background knowledge of the business field	daily conversation skills business conversation skills English speech skills English presentation skills business listening skills knowledge of unique local English expressions Japanese culture/ history
Options for Questions regarding Practice (Question 5)	
general listening daily conversation business listening business conversation giving opinions orally in meetings giving speeches giving presentations internship abroad	reading e-mails writing e-mails reading documents (e.g. business plans, report, manuals) writing documents (e.g. business plans, report, manuals) negotiations English study abroad

Appendix 3. Original Comments in Japanese

<オーセンティックな用法やコンテキストに関するコメント>

- ・教育が机上だけでなく、より、実践に即した形で行われるべきだと思います。
- ・生の英語に触れる機会がもう少し増えると尚良い
- ・文法などは、中学と高校でしっかり習うから、その程度で充分。ただ、単語は特に生活用語がとっさに口からは出てこない。

<コミュニケーションに関するコメント>

- ・正しい文法を優先というのが先に頭にあるせいなのかもしれません。実際に話していくことでより使える英語、英会話に繋がるのではないかと思います。
- ・歌を歌うとか、絵を見て単語を言うとかではなく、自然な会話や議論をするべき。自分で考えたことを英語で話す能力が重要。
- ・日本の英語教育は期間としては決して短くはありませんし、カバーしている要素は十分なように感じますが、実践としての英語教育として実際に話すことや聞く能力を伸ばす部分にはまだ不足しているところがあるように感じます。
- ・日本の英語教育において、特にスピーキングの練習が不足していると感じる。
- ・聞く・話すの教育が不足していると思います。特に、話す練習は日本にいとなかなかできないので、授業の中で取り入れていく必要があると思います。

<パブリックスピーキングに関するコメント>

- ・外国人を交えたディスカッションや、プレゼンテーションを学生のうちから行っておくと、より実践的のためになると思います。
- ・スピーキング、プレゼンテーション等の自分が発する立場にたったときの練習
- ・日本の英語教育では、圧倒的にコミュニケーションの授業が少ないと感じます。また、私見ですが、コミュニケーション等の講義は、どちらかといえば、リスニングが重視されてるように思え、スピーキングへの取り組みが不足していると感じます。まずは、文法などにとらわれず、自分の思ったことを英語で伝えるという過程が重要だと考えます。
- ・プレゼンテーションの作り方とプレゼンの仕方
- ・あるトピックに対し自分はどう考えるのか、自分の意見はどうなのかということを深く考え、相手に伝えるような練習が役に立つのではないかと

Appendix 4. Raw Frequency Data of Psy-Passives

Table 1. Raw frequencies in the spoken data

	Number of passive	by	about	at	in	with	of	to	that	full-stop
amazed	37	0	1	7	0	0	0	0	7	16
ashamed	13	0	0	0	0	0	9	0	0	4
bored	92	0	2	2	3	0	4	11	0	79
confused	11	0	2	1	0	0	0	0	0	6
convinced	26	0	2	0	0	0	3	0	11	6
delighted	24	0	0	0	0	3	0	7	6	8
depressed	22	2	1	0	0	0	0	0	1	10
disappointed	64	0	1	1	6	8	0	0	4	23
embarrassed	35	1	3	1	0	0	0	3	0	13
excited	49	1	1	1	0	1	1	0	2	19
frightened	108	0	2	0	0	0	26	20	9	57
hurt	13	0	0	0	0	0	0	0	0	8
interested	216	0	0	0	150	4	4	20	16	118
pleased	186	0	21	0	0	55	0	37	48	124
satisfied	24	0	0	0	0	10	0	0	6	8
scared	46	0	0	2	0	0	27	10	0	41
shocked	28	0	0	1	1	0	0	0	0	17
surprised	226	4	5	11	9	4	4	15	28	93
upset	112	0	21	2	0	0	0	2	10	89
worried	211	0	123	3	5	0	2	5	28	110

Table 2. Raw frequencies in the written Data

	Number of Passive	by	about	at	in	with	of	to	that	full-stop
amazed	26	3	0	8	0	0	0	4	4	2
ashamed	22	0	2	0	0	0	11	2	0	0
bored	19	2	0	0	0	5	0	2	0	6
confused	73	9	4	0	0	16	0	2	0	10
convinced	107	7	0	0	1	0	14	0	71	3
delighted	40	2	0	4	0	4	0	20	6	3
depressed	21	1	3	0	0	0	0	0	0	6
disappointed	36	3	0	4	1	14	0	0	3	9
embarrassed	15	6	0	2	0	0	0	2	0	5
excited	36	9	12	1	4	0	0	1	1	2
frightened	50	7	0	1	1	0	15	2	2	5
hurt	54	7	0	0	0	0	0	0	1	9
interested	161	1	0	0	138	0	0	12	1	5
pleased	74	3	0	1	0	13	0	25	7	11
satisfied	91	9	1	0	0	19	0	2	8	25
scared	10	0	0	0	0	0	3	0	0	4
shocked	23	4	0	2	0	0	0	2	1	2
surprised	82	13	0	13	0	1	0	14	13	9
upset	34	5	2	1	0	0	0	2	0	4
worried	52	7	15	1	0	0	0	0	0	5

Appendix 5. Assignments for the contest

<Assignment A>

Graduation from school may be compared to the launching of a ship that starts out to meet the test of wind and wave.

It is not possible that school alone, here or anywhere else, can fit you in every way for what lies before you. Each life voyage has its own difficulties and problems which must be faced alone. We have striven to help you in every way, but the future lies in your hands, and you must await the test and teaching of real experience. Yet for the successful happy voyage which we wish for you, there are beacon lights and danger signals which will surely guide you safely even among the dangerous reefs and the narrow passages of your way. Do not close your eyes to the course they point out, but faithfully accept their value.

One great beacon light is truth. It will shine in every one of our souls, if only we do not refuse to see. It points out to us our own shallow attainments, our petty meannesses, our selfishness, vanity or jealousy; and reveals to us the good in others. Thus we may escape the rocks of pride and self-love.

Follow also the guiding lights of love and devotion. In women, these are called instincts, but yet how narrow often is our love, how fickle and shallow, our devotion. Learn to love broadly, deeply and devotedly, and your lives can not fail. With nobler desires, greater earnestness and wider sympathy not limited to just a few, but taking in the many even beyond the home, the weakest of us may attain success.

Truth and devotion demand that we shall not waste our lives, but that we shall be of some real service in the world. You are responsible to your school and to your teachers that what has been gained by you shall not be lost. You have had wider opportunities than many Japanese women. May this mean much to you, and to those around you. The life guide of good books, and the great men who speak in them may be yours for the seeking.

Excerpt from "The Principal's Address to the Graduates" by Tsuda Umeko

<Assignment B>

"Between a high, solid wall and an egg that breaks against it, I will always stand on the side of the egg."

Yes, no matter how right the wall may be and how wrong the egg, I will stand with the egg. Someone else will have to decide what is right and what is wrong; perhaps time or history will decide. If there were a novelist who, for whatever reason, wrote works standing with the wall, of what value would such works be?

What is the meaning of this metaphor? In some cases, it is all too simple and clear. Bombers and tanks and rockets and white phosphorus shells are that high, solid wall. The eggs are the unarmed civilians who are crushed and burned and shot by them. This is one meaning of the metaphor.

This is not all, though. It carries a deeper meaning. Think of it this way. Each of us is, more or less, an egg. Each of us is a unique, irreplaceable soul enclosed in a fragile shell. This is true of me, and it is true of each of you. And each of us, to a greater or lesser degree, is confronting a high, solid wall. The wall has a name: It is the system. The system is supposed to protect us, but sometimes it takes on a life of its own, and then it begins to kill us and cause us to kill others-coldly, efficiently, systematically.

I have only one reason to write novels, and that is to bring the dignity of the individual soul to the surface and shine a light upon it. The purpose of a story is to sound an alarm, to keep a light trained on the system in order to prevent it from tangling our souls in its web and demeaning them. I fully believe it is the novelist's job to keep trying to clarify the uniqueness of each individual soul by writing stories-stories of life and death, stories of love, stories that make people cry and quake with fear and shake with laughter. This is why we go on, day after day, concocting fictions with utter seriousness.

Excerpt from Acceptance Speech for the Jerusalem Award

by Haruki Murakami

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<Assignment C>

"You are not at all like my rose. You are nothing to her," he said to the roses. "No one has tamed you, and you have never tamed anyone. My fox was once like you. He was once a fox just like thousands of other foxes. But I made him my friend, and now there is no one like him in all the world."

These roses were not pleased.

"You are beautiful, but you are empty," the little prince told them. "No one would die for you. Of course, an ordinary person might think that my rose looks like you. But I know that she is more important than all of you because she is the one I cared for. Because she is the one I put under a globe. Because she is the one I protected from the cold. Because she is the one I killed the caterpillars for (except for two or three that will become butterflies). Because she is the one who talked with me and who was quiet with me. Because she is my rose."

Then he returned to the fox.

"Goodbye," the little prince said.

"Goodbye," said the fox. "Here is my secret. It is very simple: we do not see very clearly, except when we look with our hearts. The things that are most important cannot be seen with our eyes," repeated the little prince. He wanted to be sure that he remembered this.

"It is the time you spent for your rose that has made her so important."

"It is the time I spent for my rose" repeated the little prince. He wanted to remember this.

"People have forgotten this truth," the fox told him. "But you must not forget it. You are forever responsible for what you have tamed. You are responsible for your rose"

"I am responsible for my rose" repeated the little prince. He wanted to remember.

Excerpt from "The Little Prince" by Antoine de Saint-Exupéry