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Comparison of Native Speaker and Non-Native Speaker Research Presentations and Its Pedagogical Implications: Case Study of Oral Presentation by Japanese Researcher

Abstract
The purpose of this study was two-fold. The first part was to elucidate the differences between the professional native English speaker (NS) and non-native speaker (NNS), when selecting vocabulary and functional grammar in written and oral work that were related in topic. The second part was to illustrate how to apply these results into pedagogical context. To attain these goals, we first analyzed the professional native English speaker’s use of vocabulary and functional grammar in written and oral work. Then, the non-native speaker’s use of vocabulary and functional grammar in written and oral work was compared with that of NS. West’s General Service List of English Words (GSL), and Coxhead’s Academic Word List (AWL) were both used to analyze the data. We also used computer software (Antcon 3.0.1) and AntWordProfiler 1.200w (windows) 2008 to observe and classify vocabulary and grammatical features specific to written and spoken texts. As a result, it was found that NS selected vocabulary and functional grammar according to their audiences’ comprehension level. On the other hand, NNS tends to write up scripts similar to a written text no matter what their audience comprehension level tended to be.

1. Overview
Quantitative studies in corpus linguistics have become integral as a major analytical method. Especially with the advancement in language computing technologies, more complex analysis such as syntax, collocations and structures. The study on statistical analysis was done by Umesaki (1997) comparing research articles and presentations to existing corpus to find the statistical distance of these different texts. Based on the cluster analysis, it was found that research articles and oral presentations belonged to different text groups further than previously examined.

In this paper, we focus on the rapidly changing medical field, specifically in nursing, where keeping up with the rapid advancement is essential in providing the best care for the patients. However the field of nursing research in Japan is lagging behind in terms of academic research and many researchers in this field have difficulty preparing for presentations in English. Therefore effective and efficient pedagogy for research presentations is necessary to meet the demand of imparting evidence-based information in nursing research as well as in medical research. On the other hand, most nursing students are already competent in reading journal articles in their research topics, but when they need to make presentations on their research they write up scripts similar to a written text, mainly because that is acceptable in Japanese context where on-line audience interaction is not expected.

What we want to do is to get our students to recognize the differences between written and spoken texts. One of the ways is to compare how native English speakers write and speak about their own research. Here, we define native speakers as who are also experts in their specific discipline. Then we will see how they differ from non-native English speaker’s presentations. Finally, after we point out different word usage and functional grammar, then we would like to discuss how those can be implemented in our classroom instructions.

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2. **Purpose**

The purpose of this study was two-fold; (1) to elucidate the differences between a professional native English speaker (NS) and a professional non-native speaker (NNS), when selecting vocabulary and functional grammar in written and oral work that were related in topic; (2) to illustrate how to apply these results into pedagogical context.

3. **Methods**

We compared the differences in the selection of vocabulary, discourse markers and functional grammar between written texts and oral work presentation scripts on the same topic. We first analyzed the NS’s use of vocabulary and functional grammar in written and oral work. Then, the NNS’s use was compared with that of NS. For vocabulary, West’s General Service List (GSL), and Coxhead’s Academic Word List (AWL) were both used to analyze the data. We also used computer software, Antconc 3.0.1 and AntWordProfiler 1.200w (windows) 2008, to observe and classify vocabulary and linguistic features specific to written and spoken texts. All of the texts were converted to plain text files for analysis using computer software. The materials used for our study were as follows. Permission of their work to be used in our research has been granted.

As materials of the native speaker of English:


- Oral Presentation: The content of the paper was presented in Ishikawa Prefectural Nursing University, Japan, in September, 2008. The content of the presentation was taped and audiotyped for this research analysis.

As materials of the non-native speaker of English:


- Oral Presentation: The content of the paper was presented in the 35th Annual Meeting of the international Continence Society in Montreal, Canada, in September, 2005. The full script of the conference presentation was provided by the presenter.

4. **Results**

4.1. **Comparison of Written and Spoken Texts (NS)**

Here are the oral presentation scripts of NS and Japanese researchers (Figure 1, 2). At a glance, the percentage of first 2500 words seems to be similar. But those words are separated into the different levels.
These screen shots are from word analysis software. What they tell us is the visual representation of vocabulary usage. Words are color-coded into different levels. Red words are level 1, first 1000 most frequently used words. Green words are level 2, second 1000 most frequently used words. Blue words are level 3, 500 academic words which came from the academic word list. In this case, 82.1% of words used in the paper came from the most frequently used 2500 words. For the presentation, 88.15% are from the 2500 words. If we look closely, Level 1 words are used more in the presentation at 79%, where the paper has 64% from level 1. For levels 2 and 3, coverage rates from the presentation are about half the coverage of the paper.
Table 1. Word counts and percentages of papers and presentations (NS and NNS)

Table 1 shows word counts and percentages of papers and presentations by both NS and NNS. For the NS’s presentation, level 1 is 79.09, level 2 is 4.97, and level 3 is 4.09. For the NNS’s presentation, level 1 is 68.65, level 2 is 8.57, and level 3 is 9.27. What this means is that the Japanese presenter is using more than 10% less from level 1 words, and twice as many words from levels 2 and 3. Levels 2 and 3 percentages are similar to written texts by both NS and NNS. What we can suggest here is that NNS tends to write up scripts similar to a written text.

4.2. Linguistic Features in Oral Presentation (NNS)

4.2.1. Word Choice

So far we have looked at what kind of words they use in both presentations and papers respectively. Here let’s look at the differences in linguistic features.

The following shows one word in NNS’s oral presentation in terms of word choice. NNS used “with regard to” four times in the presentation, with three being used one after another. In comparison, NS did not use “with regard to”, instead she used “in terms of.”

In the case of NS, “with regard to” is used as follows:

1. With regard to treatment outcomes, …
2. With regard to continuation of the muscle exercises at home, …
3. With regard to the extent of urinary loss, …
4. With regard to the type of incontinence, …

On the other hand, in the case of NS, “in terms of” is used as follows:

5. We tend to think of it in terms of phases and these phases are inflammation cellular proliferation.…

To support our idea, we checked two corpora and a dictionary. We found 53 entries of “with regard to” and 267 entries of “in terms of” based on British National Corpus and Brown Corpus. According to Collins Cobuild Dictionary, under “regard,” “with regard to” appears in 7th definition. Under “term,” “in terms of” appears in the first definition. The important point here is that there is little variation in set phrases in NNS’s presentation.

4.2.2. First language transfer

The following (6) is a sentence extracted from the NNS presentation.

6. This slide demonstrates the 7.8-year transition trees of the treatment success and treatment failure groups.

At first glance, there is nothing grammatically wrong with this sentence. Use of the verb “demonstrate” in this sentence, however, is considered to have occurred from the direct translation of Japanese. According to the list of concordance lines from the Life Science Dictionary, however,
the verb “demonstrate” is usually used with “we” as the subject and for inanimate subjects, frequently used words were results, data, or analysis. “We” as subject had 75 examples out of 300 concordance lines. For the inanimate subjects other than the most often used “we”, “results” as the subject had 31 examples out of 300 concordance lines; “data” as the subject had 17 examples out of 300 concordance lines; “analysis” as the subject had 7 examples. Therefore this sentence should be “the result on this slide demonstrates the 7.8-year transition trees of the treatment success and treatment failure groups.”

4.2.3. Long subjective clause (Noun Clause)
The following (7) is also a sentence extracted from the NNS presentation:

(7) Mr. Chairman, Members and Guests, Ladies and Gentlemen! The short-term follow-up of pelvic floor muscle exercises states that these are effective for the treatment of stress urinary incontinence.

The presentation itself starts with “Mr. Chairman, Members and Guests, Ladies and Gentlemen!” but immediately followed by this long noun phrase; “the short-term follow-up of pelvic floor muscle exercises states that ….” We can make two comments; first, the verb “states” should be used with what somebody says or documents. Muscle exercise cannot say anything. This sentence should be “The short-term follow-up of pelvic floor muscle exercises is effective for the treatment of stress urinary incontinence.” Second, the length of the subject is 10 words excluding hyphens. From the cognitive science point of view, according to the concept of “The magical number seven (Miller 1956)”, the maximum number of independent information units or chunks was $7 \pm 2$. It is the limited capacity which human could store in the brain for 50 to 60 seconds in duration. In comparison, we found no phrase consisting of more than 7 words in NS presentation. Therefore, according to Miller’s magical number seven, noun phrase should be shortened. Then this sentence should be corrected as follows:

(8) The short-term follow-up of pelvic floor muscle exercises is effective for …” or
(9) The short-term follow-up study has shown pelvis floor muscle exercises are effective for…

4.2.4. Lacking audience involvement
The following sentences are extracted from the NNS presentation:

(10) Mr. Chairman, Members and Guests, Ladies and Gentlemen! The short-term follow-up of pelvic floor muscle exercises states that … Here, we report the long-term results of our intensive physiotherapy program and ….

On the other hand, the next ones are from that of NS:

(11) So we see African-American men and Hispanic men and women with higher rates of diabetes.
(12) So I think the important point for all of us to consider as I know it is true in Japan is that the population is aging.
(13) So people that are 60 and older we see more and more of the problem.
(14) So what did the data tell us about what we can do about diabetes?
(15) So let’s talk a little bit about nutrition. Because this is very important the ceiling and in order to heal body needs sufficient calories protein and fats because some membranes are composed of fat.

As you can see clearly the differences between NS communication strategies and those of NNS, the NS presentation very often employed communication strategies such as “So let’s talk about the
problem of wound infection,” or rhetorical questions such as “What did the data tell us about what we can do about diabetes?” Discourse markers help the audience to understand the presenter’s intentions. In comparison, however, discourse markers for audience involvement are only used 4 times in the whole NNS presentation. As we have pointed out after the corpus analysis that NNS tends to write up scripts similar to a written text, it is not surprising that they don’t often use the discourse markers in their presentations, just because the discourse markers or rhetorical questions are not often employed in written work, especially articles in academic journals.

4.2.5. No reiteration of acronyms

The final linguistic feature is no reiteration of acronyms. Acronyms are also often used in research presentations. Presenters must be aware whether those acronyms are familiar to the audience. Just as in journal articles, when the acronym first appears, we normally write out the words. In the case of NS presentation, when an acronym is used, NS reads or explains. The following sentence (16) is an example extracted from the presentation of NNS.

(16) The SIP or surgical improvement project was the first focused on anti-biotic theorem.

In comparison, that of NS is as follows:

(17) He claimed that of 210 women with SUI, one-third were completely relieved and another one-third were greatly relieved.

As just described, unlike the NS case, NNS used technical terminology no matter what their audience comprehension level tended to be.

Shown below is a model script according to our findings. Original script is at the top and the corrections are shown below.

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Slide 1
Mr. Chairman, Members and Guests, Ladies and Gentlemen! The short-term follow-up of pelvic floor muscle exercises states that these are effective for the treatment of stress urinary incontinence; however, reports on long-term follow-up have rarely been presented. Here, we report the long-term results of our intensive physiotherapy program and investigate parameters that may predict favorable outcomes.

Mr. Chairman, Members and Guests, Ladies and Gentlemen, thank you for giving me the opportunity to speak here today. The topic of my presentation is on follow-up studies conducted on Kegel exercises. The short-term follow-up study has shown pelvic floor muscle exercises are effective for the treatment of stress urinary incontinence…

Slide 2
In 1949, Kegel was the first to apply pelvic floor muscle exercise to women suffering from stress urinary incontinence. He claimed that of 210 women with SUI, one-third were completely relieved and another one-third were greatly relieved. This promising non-surgical treatment modality was completely ignored and forgotten for the subsequent 30 years until 1981, when Hendrickson revived the practice of the Kegel exercise.

Let me first give you a little historical background. In 1949, Kegel was the first to apply pelvic floor muscle exercise to women suffering from SUI, stress urinary incontinence. He claimed that of 210 women with SUI, one-third was completely relieved and another one-third was greatly relieved. However this promising non-surgical treatment modality was completely ignored and forgotten for the subsequent 30 years until 1981, when Hendrickson revived the practice of the Kegel exercise.

Slide 3
A total of 123 women originally participated in an 8-week intensive program of pelvic floor muscle exercises that took place from 1990 to 1994.

Next, let me go on to the details of our study. A total of 123 women originally participated in an 8-week intensive program of pelvic floor muscle exercises that took place from 1990 to 1994.
Slide 4
We aimed to assess the long-term results of intensive PFM training an average of 7.8 years later and to look for any prognostic parameters which may predict the favourable outcomes. … With regard to treatment outcomes, treatment was defined as being successful in the women who were cured or who showed much improvement... In order to assess the long-term results of intensive PFM training we chose an average of 7.8 years later and to look for any prognostic parameters which may predict the favourable outcomes. … In terms of treatment outcomes, treatment was defined as being successful in the women who were cured or who showed much improvement...

Slide 5
The total of 123 women originally participated in the intensive physiotherapy. These women were evaluated immediately after the therapy. The second assessment was made via postal questionnaires an average of 2.3 years after the therapy... This is the details of number of subjects who participated in each assessment. The total of 123 women originally participated in the intensive physiotherapy. These women were evaluated immediately after the therapy. The second assessment was made via postal questionnaires at an average of 2.3 years after the therapy...

Slide 6
The present follow-up data are illustrated at the right end of the slide. Thirty-one women, 39%, subjectively assessed the treatment as successful, TS, whereas 48 women, 61%, assessed the treatment as failed... The follow-up data for the present study are shown at the right end of the slide. Thirty-one women, 39%, subjectively assessed the treatment as successful, TS, whereas 48 women, 61%, assessed the treatment as failed...

Slide 7
This slide demonstrates the 7.8-year transition trees of the treatment success and treatment failure groups. The first row of the treatment success group reads as SSS... The results on this slide demonstrate the 7.8-year transition trees of the treatment success and treatment failure groups. The first row of the treatment success group reads as SSS...

Slide 8
With regard to continuation of the muscle exercises at home, 15 women, 19%, responded they have either continued or resumed the exercise; however, the remaining 64 women, 81%, discontinued the exercise. With regard to the extent of urinary loss, 13 achieved total continence, 16 lost a few drops and stained their underwear, 34 wet their underwear, 10 wet their skirt or trouser, and 2 showed a large extent of incontinence. With regard to the type of incontinence… In terms of continuing muscle exercises at home, 15 women, 19%, responded they have either continued or resumed the exercise; however, the remaining 64 women, 81%, discontinued the exercise. In terms of the extent of urinary loss, 13 achieved total continence, 16 lost a few drops and stained their underwear, 34 wet their underwear, 10 wet their skirt or trousers, and 2 showed a large extent of incontinence. In terms of the type of incontinence...

Slide 9
We found that once a certain level of continence is established with physiotherapy, that level can be maintained over a period of 7.8 years. Strong vaginal contraction power at the end of the physiotherapy is a useful predictive parameter for favorable outcomes... From a nurse's point of view it is important to provide strong motivation to women and to increase their muscle awareness under the supervision of a physiotherapist... Let me sum up here. In this long-term follow-up study, we found that once a certain level of continence is established with physiotherapy, that level can be maintained over a period of 7.8 years. Our results also suggest strong vaginal contraction power at the end of the physiotherapy is a useful predictive parameter for favorable outcomes... From the perspective of nursing, it is important to provide strong motivation to women and to increase their muscle awareness under the supervision of a physiotherapist...

5. Conclusions
We compared NS and NNS presentations and found several differences in linguistic features. To sum up what we found in our study; (1) levels 2 and 3 words were used more often in the NNS presentation compared to that of NS; (2) there is little variation in set phrases in the NNS presentation; (3) in the NNS presentation, there are some sentences occurring from the direct translati-
on of Japanese; (4) compared to the NNS presentation, we found no phrase consisting more than 7 words in that of NS. (5) the NNS presentation did not employ communication strategies; (6) in the case of the NNS presentation, when an acronym is used the NNS did not reiterate or explain the acronym.

As a result, it was found that the professional native English speaker selected vocabulary and functional grammar according to their audiences’ comprehension level.

On the other hand, NNS used technical terminology no matter what their audience comprehension level tended to be.

In consideration of the effective pedagogical implementation, we believe that demonstrating the process of text modification using authentic materials is effective as well as has practical implication in classroom instructions. Also one way of implementing these results in our teaching could be by using actual journal articles related to student’s research topic and practice making presentations of the articles using discourse markers or other speech strategies. Another way could be by using internet resources such as YouTube or pod-casting to let the students search discourse markers. Ideally, English for Specific Purpose instructors should have access to authentic presentations in related research topics. More collaboration with field expert researchers is necessary to achieve a reasonable amount of authentic materials. Furthermore, only analyzing the written transcripts fails to actually convey how effective presentations are made. We also need to pay attention to intonation and stress features for pedagogical application.

Supporting Corpora Data
1. British National Corpus (Written and Spoken), Brown Corpus [online]. http://www.lextutor.ca/concordancers/concord_e.html

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