ABSTRACT
        This paper discusses a study on the composing
processes by which native Japanese, Japanese Americans, and native
Americans write technical or business English. Results of the study
revealed a specific preference by students for one of the three
general phases of composing: pre-writing, writing, or rewriting.
Although the process preference did not correlate with native
language, it did correlate with measures of product quality: i.e.,
the texts of pre-writers had greater lexical cohesion, and those of
rewriters had fewer grammatical and spelling errors. Native language
did correlate strikingly with a major rhetorical difference in the
products, a difference apparently related to differing rhetorical
expectations that seem to be culturally defined. Three suggestions
are provided for teachers of adult English-as-a-Second-Language (ESL)
students, including: (1) encourage formal pre-writing, even to the
extent of offering a question-and-answer template to the fledgling
writer; (2) force an awareness of audience and purpose in the
business or technical writing process of ESL students; (3) urge ESL
writers to focus on rhetorical structure during their rewriting.
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1

ESL Technical Writing: Process and Rhetorical Differences
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Abstract: This paper draws on my dissertation (Dennett, 1985),
focused on the composing process of non-native Japanese
(Nihonjin) speakers-of-English writing technical or business
English, and comparing that process with that of their native-
English-speaking peers. I describe how the individual composing
process of each of five native speakers of English and five
native speakers of Japanese was idiosyncratic to the writer
regardless of native language. A specific preference was evident
for one of the three general phases of composing: pre-writing,
writing, or rewriting. Although this process preference did not
correlate with native language, it did correlate with measures of
product quality -- the texts of pre-writers had greater lexical
cohesion, and those of rewriters had fewer grammatical and
spelling errors.
     Native language did correlate strikingly with a major
rhetorical difference in the products, a difference apparently
related to differing rhetorical expectations that seem to be
culturally defined. This cultural definition is so clear in the
case of native speakers of Japanese that they were apparently
addressing an underlying communication goal that is very
different from that of native English speakers educated to admire
Aristotelian logic.
     This study suggests the following to teachers of adult ESL
writers:
     ●   Encourage formal pre-writing, even to the extent of
offering a question-and-answer template to the fledgling writer.
     ●   Force an awareness of audience (and, concurrently,
purpose), in the business or technical writing process of ESL
students.
     ●   Urge ESL writers to focus on rhetorical structure during
their rewriting; to step back from the "trees" of mechanical
errors and gain a better perspective on the "forest" of
rhetorical strategy.

Introduction

     This study examined the process by which native Japanese

speakers, Nihonjin, write technical English. I used 10 subjects

-- five Japanese, five American.* They were all mature writers

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*In keeping with the usual ethnographic process of guaranteeing anonymity to the subjects,
pseudonyms are used for both people and identifiable workplaces.

2

working and writing in their respective professions.

I was interested in examining and contrasting the composing processes of native American, Amerikajin, and native Japanese, Nihonjin, technical writers.

The term technical writing, as I am using it, refers to any writing used in the technical, scientific, or business workplace to convey information of a descriptive, persuasive or reportorial nature.

I started out, of course, with the premise that there would be a difference in the writing process of Amerikajin and Nihonjin. In the mechanistic sense of prewriting -- writing -- rewriting, this was not true. There were distinct groups of writers: those who preferred prewriting, for example, and those who preferred rewriting. But this had no relation to native language. Two Americans and one Japanese were what I call prewriters; they preferred prewriting almost to the exclusion of rewriting. One American and one Japanese were rewriters, and the rest -- three Japanese and two Americans -- fell in between, a classification I've labeled "writers."

What I'm calling "Process Preference" thus did not correlate with native language but it did correlate with some measures of product quality. Specifically, the prewriters produced text with greater lexical cohesion and the rewriters produced text with fewer grammatical and spelling errors.

On the average: the writers produced the most words with the least cohesion; the prewriters packed the most cohesion into the

fewest T-units; and the rewriters averaged the highest average levels of writing maturity. The Nihonjin wrote more words and substantially more T-units but they had lower average scores on both words per T-unit and single-word modifiers per T-unit (Dennett, 1988).

Essentially, the main idea that these quantitative findings suggest is that ESL teachers should encourage their more experienced students to focus on prewriting -- this should increase lexical cohesion and, with it, the readability and utility of their technical writing.

Qualitative Findings

This suggestion to focus on prewriting is borne out by some of the more qualitative observations -- and it is on these qualitative observations that I want to focus today. But first, I'd like to quickly tell you a bit about the subjects and the observations.

It is important to remember that all of the subjects write regularly in their own work. So we are dealing in all 10 cases with mature individuals. Also, the five Nihonjin are all fluent English speakers.

So who are they?

First the ones I called WRITERS:

Keiko Osara--a linguistics professor;

Junishi Takashi--a retired business executive currently doing graduate work in linguistics with Professor Osara;

Samuel Babcock--an engineering manager in a small entrepreneurial firm;

Kevin Upshaw--an engineering manager in a large, international firm;

and Sho Midorikawa, a post-doctoral researcher at a research institute.

Now the PREWRITERS:

Shawn Eddy. a fellow manager with Mr. Upshaw--that is, an engineer in a large, international firm;

Dorothy Taylor, a researcher at the university--a physicist;

and Gakusoburo Okiyama, a visiting engineering professor

And lastly the REWRITERS:

Theodore Thomas, a scientist in a research institution and much published in the popular press as well;

and Nobuo Tanaka, a business student. He is the least experienced technical writer among the 10 subjects.

I patterned the "compose aloud" protocols after those pioneered by Emig (1971) and expanded by Perl (1979), Flower and Hayes (1980), and Selfe (1984). The first stimulus was an encyclopedia illustration of the trade of Rome. This is essentially a task of description. It offers a combination of macroinformation about scale and type of trade and microinformation about specific items and specific locations of origin. Some other aspects that could be discussed were such observations as the possible reasons Rome had for importing

vicious wild animals and the one-way nature of the "trade"--
everything went to Rome.

The second writing task was a matter of data analysis
comparing unemployment rates for two time periods in light of
variables such as sex, age, education, etc. Here, too, there is
another aspect that the writer could choose to discuss. There is
an inherent problem in the way the data are presented: it is
unclear which lines are totals--that is does the first line "age
18 and over" include all subsequent lines or not?

Viewing the subjects as two groups differentiated by native
language, some interesting differences were apparent in both the
writing itself and the attitudes of the subjects toward writing.

For example, native language did correlate clearly with a
major difference in the products--a difference apparently related
to differing rhetorical expectations that seem to be culturally
defined.

W.V.Ruch, writing in his book, *Corporate Communications: A
Comparison of Japanese and American Practices*, notes that the
purpose of communication in Japan is to transmit information and
to provide an emotional message.

A similar observation has been made by Amemiya who,
discussing traditional attitudes toward the written language in
Japan, says, "Japanese educators do not usually treat it as a
vehicle for expressing facts or for the *logical development of
ideas.* On the contrary, Japanese students at all levels are

instructed in the more literary possibilities of written Japanese, its use to evoke feelings or impressions."

This view of writing surfaced in the products, in class and in interviews with my subjects.

When asked to describe good technical writing, my Nihonjin subjects cited the usual goal of clarity but they also usually added elements such as beauty, surprise, and "flow" as desirable measures of good writing.

Thus, the Japanese desire to surprise, delight, or otherwise engage the emotions of the reader can often interfere with the American expectation that writing will move from premise to conclusion through readily identifiable patterns of inductive or deductive reasoning.

Just as expectations from writing varied between the Amerikajin and the Nihonjin subjects, so did their attitudes toward writing itself. Two clear themes arose in the observations and self-descriptions of each of the five native-English speaking subjects. These two themes were absent from the Nihonjin observations and self-descriptions. The two themes were:

● Each American subject was consciously aware of an audience when writing.

● Each American subject described writing as a tool necessary in his or her work -- a tool that serves both as an exploratory end and as a documentary device.

Dr. Thomas and Dr. Taylor, for example, are very aware of an audience of critics: Are they correct? Can they be challenged? Have they adequately hedged?

Mr. Upshaw, Mr. Babcock and Mr. Eddy are concerned with an audience of users -- are they understandable? Have they hit all the important points?

The Nihonjin did not seem to think about or perhaps even care about an audience; at least not in these exercises. For example, after she had written the statistics exercise, I asked Professor Osara directly, "Did you have any particular audience in mind when you wrote this?"

Her "no" response elicited a further probe. "You didn't think maybe they'll define their stats better when they read this?"

Again, "No."

A second interesting qualitative difference is that the Amerikajin all use writing in their work both as a discovery process for themselves and as a tool for reporting work accomplished. The Nihonjin regard writing as the wrap-up stage of thinking, a separable work task to be addressed separately. Thus, you cannot start writing until you know what you want to say; until you are finished with your work.

Each described writing as a task separate from and necessarily done after any thinking or discovery process. If, in fact, they turned up "discoveries" as they wrote the protocols, they were set aside. Mr. Tanaka, for example, encountered the

underlying problem with the statistics data about mid-way through his writing. He noted it aloud and then said, "I might have...if I said it again..." and discarded the idea to proceed with his original analysis of the data.

Viewing writing as a discrete task carried over into the Nihonjin use of rewriting time. Nihonjin rewriting was almost exclusively focused on mechanical considerations--grammar and spelling--whereas Amerikajin subjects usually restructured ideas and order or made other substantive changes.

So, what's the message for ESL technical writing teachers? The short message is: work to focus prewriting on audience and purpose and rewriting on structure.

How do you do this? You can encourage prewriting-- especially the kind that offers organizational models or patterns with formal prewriting.

Prewriting forms like those used in elementary technical writing textbooks can be helpful. There are also others, such as Figure 1, developed for use with working engineers. Once the writer has thought about the utility of each part of this form to his or her work, he or she will be well on the way to a coherent- -by Western standards--piece of writing.

You can use generic forms such as these for much more than the engineering-style tasks for which they appear to be intended.

Professor Osara, for example, used the "describe a device" template for a paper she was writing on the use of the passive voice in Japanese. The passive in Japanese obviously isn't a

thing like a hammer or a computer but it is, in a broad sense, "a device or mechanism." Figure 2 details how she used this prewriting plan for her paper.

Figure 3 is her first draft--written from the prewriting template. So, formal prewriting was clearly helpful--both in capturing ideas and in organizing those ideas along expected patterns of presentation. These are the same expected patterns of presentation that we should encourage ESL students to check for in their rewriting.

Conclusion

The problem of shifting ESL writers' attention from mechanics to global issues is difficult. Probably the only way to shift the rewriting focus from mechanical errors to structural considerations is to clearly define two separate rewriting steps. Convincing ESL writers to leave proofreading and checking for grammatical errors until the last step is very hard.

For years they have been penalized for misspellings, wrong articles, incorrect prepositions, and awkward word choices. The constant focus on such problems derails most thoughts of rewrites for structure. But, if both you and your students can step back from the "trees" of mechanical errors to view the "forest" of rhetorical strategy, you'll both have better products -- be they writing students or written papers.

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FIGURE 1

<u>Pre-Writing</u> <u>Plan</u> <u>for</u> <u>DESCRIBING</u> <u>A</u> <u>DEVICE</u> <u>OR</u> <u>IDEA</u>

The name of the device or idea I am writing about is........

Is it proposed or does it already exist?.......

I am writing this so the following people can understand it

My purpose in writing this is:
    __   To help my audience identify it
    __   To help my audience understand the uses of this device/idea
    __   To convince my audience that this device/idea is useful/
          cheap/good/bad/other (select one or more)
    __   To help my audience construct the device
    __   To help my audience use the device/idea
    __   Other

This device or idea can do the following things/is used for/is
good at (select one or more):

WHO uses this device or idea?

WHEN do they use it (under what circumstances/conditions/
    requirements)?

WHERE do they use it?

HOW do they use it? (is PROCESS pre-writing plan necessary here?)

FiGURE 2

Pre-Writing Plan for DESCRIBING A DEVICE OR IDEA

The name of the device or idea I am writing about is........

      INANIMATE PASSIVE IN JAPANESE

Is it proposed or does it already exist?..YES...

I am writing this so the following people can understand it

      LINGUISTS

My purpose in writing this is:

    ✓ To help my audience identify it
    ✓ To help my audience understand the uses of this device/idea
    ✓ To convince my audience that this device/idea is useful/
        cheap/good/bad/other (select one or more)
    __ To help my audience construct the device
    __ To help my audience use the device/idea
    __ Other

This device or idea can do the following things/is used for/is good at (select one or more):

    JAPANESE PASSIVE IS USED TO INDICATE AVERSITY; THEREFORE INANIMATE
    SUBJECTS SEEM AWKWARD. THEY ARE HOWEVER ACCEPTABLE. I EXPLAIN THIS
    BY SALIENCE.

WHO uses this device or idea?

    NATIVE SPEAKERS OF JAPANESE

WHEN do they use it (under what circumstances/conditions/
   requirements)?

WHERE do they use it?

    ADVERSITY SITUATIONS

HOW do they use it? (is PROCESS pre-writing plan necessary here?)

$$NP \begin{Bmatrix} ga \\ wa \end{Bmatrix} NP\text{-}O \; VP$$

inanimate

13

FIGURE 3

Inanimate Subjects in Japanese Passives

It is well-known that inanimate subjects are not usually allowed
in Japanese Passives. However, sometimes such sentences can be
allowed. I will discuss it in terms of "salience" opeartion.

The typical Japanese passive structures are the following:

(1) NP 1-ga NP2-ni transitive verb-passive...
(2) NP-ga NP2-ni intransitive verb-passive...
(3) NP1-ga NP2-ni NP2-o·trasitive-passive...

Usually, the NP1 (subject) is human and, in many cases, a victim of
the event. Thus, the following sentence is regarded as ill-formed:
(4) Okane-ga doroboo-ni nusum-are-ta
       money   thief   steal-passive-past
    "The money was stolen by the thief."

However, this sentence is acceptable depending on the informant, and
furthermore, the same informant judges it differently at different times.
It seems it feels acceptable when the informant feels a victim in his
mind. Thus, sentence (3) can be from (4), which has the sentence pattern
(2).

(4) someone(victim)-ga doroboo-ni okane-o nusum-are-ta.·
    "someone (victim) had his money stolen."

Sentence (3) is derived from (4) after NP-ga is deleted, NP-o is fronted
and o is changed to ga to become a subject. Then it has the pattern (1).

Besides other salience operations in Japanese such as scrambling and
topicalization, the direct object NP3 in (2) is given salience. I will
call this focussing.