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Chinese Learners' Japanese Verbal Behavior Styles When Using Cell Phones: Comparing Text and Voice Messages

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In the present study, an experiment was conducted to collect data of Chinese learners' Japanese usage. Multiple methods of content analysis and discourse analysis were employed to compare their verbal behavior styles in politeness strategies and felicity of conversations between text and voice messages when it comes to the use of cell phones. As a result, the correlation coefficients between the coders were very high in both ratings. Different from their grammatical errors, no significant differences were found for medium in the politeness strategies or felicity of conversations, but the main effects for gender were detected in both cases. Implications and issues for future research are discussed in terms of Japanese language learners' use of cell phone text messages and voice messages.

Keywords: cell phones, Chinese learners, verbal behavior, politeness strategies, felicity

Introduction

Over the last decade, cell phones have become one of the most prevailing media in Japan. At present, not only do most Japanese students own a cell phone, but 95.6% of international students in Japan also own one, and 75.8% of the latter use cell phone text- messaging services to communicate (Mizuta, Doi, & Yamamoto, 2004). Therefore, cell phone text messages are used to support and help Japanese language learners in Japanese education (e.g., Furukawa, 2001; Nakanishi, 2005; Yamamoto, Mizuta, & Doi, 2005; Yokoyama, Toyoma, Takada, & Yoneda, 2008), and they are used as translation tools between Japanese and Chinese languages (e.g., Tang, 2007). On the other hand, in other countries, college students in China, for example, are learning English on voice-only cell phones (BBC Press Office, 2005). In Canada, English vocabulary testing software has been developed by the corporation Go Test Go, in which people can learn easily on voice-only phones (Prensky, 2005). In addition, there is research on children's learning of letters with elmo through cell phones in the United States (Horowitz et al., 2007). However, up until now, little research has been focused on making good use of cell phone voice messages to develop support systems in Japanese learning.

Compared with other media, cell phones "not only enlarge speaker's range of behaviors and connect with target persons immediately, but also develop creative verbal ideas and expressions

to communicate" (Miyake 2000, translated by the author). What is more, Tsuzuki & Kimura (2000) took up the four kinds of communication mediums: face-to-face (FtF), cell phone voice messages, cell phone text messages, and e-mail via Internet, to examine their psychological characteristics. As a result, it was clarified that in terms of effectiveness and speed of information transmission, "Cell phone voice messages = FtF > Cell phone text messages = E-mail"; in terms of the extent of interpersonal tension, "FtF > Cell phone voice messages = E-mail > Cell phone text messages." From these, it can be said that cell phone text messages and voice messages have their own characteristics in the kinds of communication mediums, including FtF, phones and e-mails, and so on. Considering that Japanese language learners will continue using cell phones in the future, it is important and necessary to examine cell phone text messages when they are used as tools in Japanese learning and education.

Additionally, it is said that communication through cell phones has greatly influenced Japanese young persons' verbal/nonverbal behaviors and expressions (Miyake, 2000). Thus, there is research that has clarified the following: (i) the relation between politeness strategies and verbal expressions when a young person uses cell phone text messages (Miyake, 2003); (ii) their verbal behaviors when making invitations or refusals through cell phone text messages (Lee, 2010); and (iii) the appropriate apology styles between young friends (Ohama, Sakamoto, & Sakuraba, 2010). However, all of these studies have only focused on cell phone text messages; whether they differ from voice messages remains unknown. Moreover, most of these studies have so far focused on close friends, but disregard factors such as a person calling someone or sending text messages to other people before they meet, something we experience in our daily lives. Finally, these results are only for Japanese native speakers; it seems there is no examination of Japanese learners' verbal/nonverbal behavior styles. Therefore, investigating these questions is a prerequisite to demonstrating (a) what is the Japanese language learners' verbal behavior styles when using cell phone text messages to communicate with those who are not their close friends, and (b) their verbal behavior styles between text messages and voice messages via cell phones.

The purpose of this study is to clarify the Japanese language learners' verbal behavior styles when using cell phone text messages and voice messages to communicate with those they met the first time. Then, based on the results, the present study compares them with references about Japanese language learners and seeks to obtain implications concerning aspects for future support and development in Japanese education.

The present study employed multi-analysis methods of content analysis and discourse analysis, which are often used in sociology and language, respectively. The procedure ensures the objectivity of analysis and the reliability of the inter-rating coders.

Method

Experiment

The present study conducted an experiment to collect Japanese language learners' conversation data as follows.

One Japanese student (Japanese native speaker: JNS) asked one Chinese international student (Japanese language learner: JLL) questions using text or voice messages via cell phones, then read or heard their partner's responses. There were seven questions on the list (see Table 1). Before the experiment began, the JNSs received the list and were instructed not to ask any other questions except those on the list and not to make any comments about their partner's responses. However, they were allowed to confirm their partner's responses. The JLLs were instructed that all they had to do was to respond to each question posed by the JNSs. They could respond freely but could not ask any questions unless they were unable to understand the meaning in the voice condition (Ye, Shoun, Aita, & Sakamoto, 2009b). In each condition, the JNSs asked a question, waited for a response, and then moved on to the next question. Additionally, before the experiment began, both the JNSs and JLLs were asked to perform a 5-minute input practice to make sure there were no obstacles to sending or receiving text messages and that they were accustomed to inputting messages. For voice message conditions, conversations between the both participants were recorded.

General topics	Personal topics	
1. How long have you been in Japan?	1. What's your major?	
2. Why did you come to Japan to study?	2. Why did you come to this university?	
3. What do you think of your life in Japan?	3. How would you feel about your student life?	
4. Do you often call your family in China or send	4. Do you often do extracurricular activities and the	
them e-mails?	circle with your friends of the university?	
5. What do you think of the university system of	5. Do you always make phone calls or send presents	
Japan? Are there any differences with the	on your family's birthday or Mother's day, ect.?	
6. What kind of advantages/disadvantages do you	6. What kind of job would you want to do in the	
think that Japan or Japanese has?	future?	
7. What do you think of mutual understanding	7. If you could ask a genie to grant you any wish,	
between Japanese and Chinese?	what would you wish for?	

 Table 1. Two Types of Topics

There were two types of topics on the list: a personal one and a general one (Table 1). In the personal topics, there were questions such as "what is your major?" and "what kind of job would you like to do in the future?" In the general topics, participants interacted with intercultural conversations, including "what kind of advantages/disadvantages do you think that Japan or Japanese has?" and "what do you think of mutual understanding between Japanese and Chinese?"

The medium and topic they interacted with were randomly assigned. A total of 80 students (50 females), 40 JNSs (undergraduate and graduate students) and 40 JLLs (undergraduate, exchange, graduate, and research students), participated in the experiment. They were from Ochanomizu University and the University of Tokyo. The experiment was a 2 (medium: voice vs. text) \times 2 (topic: general vs. personal) factorial design, both being between-subject factors. One JLL and one JNS of the same gender were paired.

The experiment was conducted from the end of November 2008 to the beginning of February 2009.

Analysis

The present study analyzed the JLLs' *politeness strategies* and *felicity of utterances* in their conversations.

Politeness strategies: According to Miyake (2003), there are politeness strategies for *relation-making* and *linguistic form* in Japanese young persons' cell phone text messages between friends. The former refers to avoiding giving unpleasant feelings, avoiding giving impressions of coolness, trying to express feelings correctly, making the receiver feel the message is pleasant to read, among others. The latter refers to not omitting subject, not typing incorrect expressions, expressing clearly without erratum, and so on. Among these strategies, the negative ones are more than the positive ones, which is similar to other kinds of Japanese people's daily communication styles (Miyake, 2003). In other words, these politeness strategies are general in Japanese native speaker's communication. This characteristic allows us to assume that JLLs might be expected to use these strategies with their progress in Japanese acquisition. Therefore, the present study analyzed the JLLs' conversations in both strategies of the "relation-making" and "linguistic form" aspects.

Two coders rated whether the JLLs' responses are polite or not using a 5-point scale (1. not polite at all; 3. not to say either; 5. very polite). The two coders read the JLLs' responses to determine whether there are suitable politeness strategies for the above-mentioned "relation-making" and "linguistic form" from a Japanese native speaker's viewpoint, then rated them by *deducting marks*.

For instance, in terms of "relation-making" politeness, if none of the above-mentioned politeness strategies were lacking and the sentence was constructed by natural and fluent Japanese, the rating score was assumed to be "5" (Ex. 1). If one of the strategies was lacking, it would be rated as "4" (Ex. 2). The score "3" was given for those using polite forms such as "desu/masu," but no strategies mentioned above could be found (Ex. 3). The score "2" was given for those using polite forms such as "desu/masu," but no strategies mentioned above could be found (Ex. 3). The score "2" was given for those using polite forms such as "desu/masu," but no strategies mentioned above could be found, (Ex. 4). Finally, if no polite form of "desu/masu" was used, then the rating score was "1" (Ex. 5; all English sentences are translated by the author).

Ex.1:

- JNS: はじめまして、実験参加者です。さて、あなたの大学での専攻を教えていただ けますか? (How do you do? I am a participant. Could you tell me what's your major in the university, please?)
- JLL: こんにちは!私の専門は生物材料科学です。現在大学院一年生です。よろしく お願いします。(Hello. My specialty is biomaterials sciences. I am now in the first year of graduate school. Thank you.)

Ex.2:

- JNS: こんにちは。あなたは日本に来て何年目ですか? (Hello, how long have you been in Japan?)
- JLL: はじめまして。日本に来て2年目です。 (How do you do? It's my second year in Japan.)

Ex.3:

JNS: インタビューを始めさせていただきます。あなたは、日本にきて何年目ですか? (Please allow me to conduct an interview. How long have you been in Japan?)
JLL: 2ヶ月ぐらいです。(It has been about two months.)
Ex.4:
JNS: …それでは博士号を取った後、どのような職業に就きたいと考えていますか? (...What occupation would you like to start after you get a PhD?)
JLL: 医療会社で就職したいですよ。できるだけオリンパス。 (I want to find employment in a medical treatment company. Olympus, if possible.)
Ex.5:
JNS: 今から7つの質問をさせて頂きます。ご専攻を教えてもらえますか? (Please allow me to ask seven questions from now. Can you tell me what you are majoring in, please?)
JLL: 精密機械 (Precision engineering.)

Next, the two coders also rated the felicity of the JLLs' responses by a 5-point scale (1. not felicitous at all; 3. not to say either; 5. very felicitous). When rating, if the JLLs' response was not related to the questions, it would be rated as "1" (Ex. 6). The score "3" was given to those using ambiguous expressions such as "So-so" and "There is no special reason" (Ex. 7). A score of "4" was given to those who did not lack anything, but only responded to the questions (Ex. 8). Finally, in addition to the suitable content of the answers, if the way of responding was natural enough that the coders did not feel any discomfort, then it would be rated as "5" (Ex. 9).

Ex.6:

- JNS: 日本人と中国人の相互理解の現状について、どう思いますか。 (What do you think of mutual understanding between Japanese and Chinese?)
- JLL: うん、日本人は他人の細かいところまで、心かけるし、心配するので、なんか 心かけるこの面はいいと思います。はい、総合的に。

(Japanese people pay attention to other persons, including lots of detailed points, and they always care and worry about others. I think they are considerate of others, general speaking.)

Ex.7:

- JNS: では、あなたは、なぜ日本に留学しに来ましたか? (So, why did you come to Japan to study?)
- JLL: まあ、特別な理由はないですね。(There is no special reason.)

Ex.8:

JNS: …どうして日本に留学しにきたのか教えてください。

(Could you tell me why you came to Japan to study, please?)

JLL: 大学のとき専攻は日本語だったのかもしれないので、日本に来て見ようとした とおもいます。

(Perhaps because I majored in Japanese language at the university, so I wanted to come to see it)

Ex.9:

JNS: なぜいまの大学を選んだのですか?

(Why did you choose to come to your present university?)

JLL: 自分は繊維に関する化学合成などの研究に興味があります。いまの研究室はこ

れを中心に取りくんでおり、レベルてきには高いと思いますので、ここに来たんです。

(Because I am very interested in research on chemical synthetic fibers. The present laboratory focuses on this field and it is supposed to be at a very high level. So I decided to come here.)

Procedures

For the purposes of rating, the JLLs' responses were divided into units that had complete meanings. Responses in the text condition were basically divided according to the punctuation marks that the JLLs had entered. However, there were some JLLs who did not type punctuation, in which case the sentences were divided according to line breaks (including the use of emotion signs). For example, Ex. 10 was divided into two independent units.

Ex. 10: はじめまして /日本に来て2年目です (How do you do (Line break) / It is my second year in Japan)

All the conversations in the voice messages were transcribed and excluded fillers such as *un*, *hai*, and *etto*. Those simple sentences were counted as units in themselves. In terms of complex sentences, the units were counted as representing cohesive meanings that could be understood as causation or paradoxical relations, and so on. As Ex. 11 shows, the simple sentence "I'd like to become a professor in universities" was counted as one unit, whereas the complex sentence "For the moment it is just my hope and maybe just a dream" was counted as another unit because it represented a parallel meaning.

Ex. 11: 大学の先生になりたいですね/一応希望として(,) まだ夢ですが。 (I'd like to become a professor in universities / For the moment it is just my hope and maybe just a dream.)

Two Japanese native speakers (both were female graduate students) were trained on how to understand the evaluation standard and how to rate adequately. Then they read the materials and gave ratings by referring to the evaluation manual and choosing suitable scores for each unit. They then filled in the sheets.

Results

Standards of Analyzed Participants

To ensure that the JLLs were able to sufficiently communicate with the JNSs in each condition, the present study set the following standards, stating that the JLLs must do the following: (a) have scores over Level 2 on the JLPT (Japanese Language Proficiency Test); (b) if not JLPT qualified, then have more than a 2-year history of Japanese learning or time living in Japan before participating in the present experiment; or (c) have more than a 2-year total history of Japanese learning and of living in Japan for those who could not meet the first two standards.

As a result, data from 5 JLLs were disqualified from the analysis. The present study analyzed the data of the remaining 35 JLLs (13 males and 22 females). The average age of these 35 JLLs was 25.0. Among them, 21 JLLs had passed JLPT-Level 1, three had passed JLPT- Level 2, and the other eleven JLLs' history of Japanese leaning or living in Japan were more than 2 years (range: 2-15 years).

Validity of Participant Assignment

To confirm the homogeneity of the participants assigned to each condition, the present study conducted a 2 (medium: voice vs. text) \times 2 (topic: general vs. personal) \times 2 (gender: male vs. female) analysis of variance (ANOVA) using the JLLs' JLPT scores, their history of Japanese learning, and their history of living in Japan as dependent variables. The analysis revealed no main effects or interactions for each independent variable except for the main effect for gender in their JLPT scores (female scores were higher, p<.05).

These results supported the appropriateness of the random assignment.

Reliability and Calculation of Score

The rating reliability was calculated by the two coders' rating of each JLL's total score in the concerned item. As a result, the correlation coefficients between the two coders' ratings were r=.99 and r=.98 in "politeness strategies" and "felicity of conversations," respectively. The results showed extremely high reliability.

As all ratings were rated on a 5-point scale (namely, ranks "1, 2, 3, 4, 5"), the criterion of whether the two coders' ratings were agreeable became extremely important. For instance, if one coder rated "5" and the other rated "2" for the same unit, it is difficult to say which value should be used because these two values represent two different ranks. Thus, an average of the two coders' ratings was used as the score of the concerned item.

Analysis of Results

The present study analyzed each response of the JLLs. As they answered freely in each condition, their numbers of units were different. Thus, when calculating, the two coders' rating scores for each unit were summed up, respectively, and then the average score of this total score was used as the score of the concerned item for each JLL. For example, if one JLL's responses were divided into 8 units, and one coder's rating score of each unit was "4, 5, 4, 5, 4, 5, 4, 4, 4, " (34 in sum) while the other coder's rating score was "4, 4, 4, 5, 3, 4, 5, 4" (33 in sum), then the score for this JLL was calculated as "(34+33)/2=33.5." Based on these calculations, "the JLL's score of the item/number of units" was used as a dependent variable.

First, in terms of "politeness strategies," a 2 (medium: voice vs. text) \times 2 (topic: general vs. personal) \times 2 (gender: male vs. female) ANOVA was conducted. This analysis revealed a main effect for gender (male vs. female: Ms= 8.61 & 9.16; F(1, 27)=6.56, p<.05). However, neither the main effects nor the interactions for medium or topic were found. Next, the politeness strategies for relation-making and linguistic form were divided and used as dependent variables,

respectively, and were submitted to the same 3-factorial ANOVA mentioned above. As a result, in both cases, the main effects for gender were significant. In the former case, male vs. female, the results were Ms=4.26 & 4.54; F(1, 27)=4.87, p<.05; in the latter case, male vs. female, the results were Ms= 4.39 & 4.62; F(1, 27)=6.09, p<.05.

Next, in terms of "felicity of conversations," the dependent variable was submitted to a 2 (medium: voice vs. text) × 2 (topic: general vs. personal) × 2 (gender: male vs. female) ANOVA. This analysis yielded the main effects for topic (F(1, 27)=7.79, p<.01) and gender (F(1, 27)=4.75, p<.05). In addition, interactions for the medium and topic were also found (F(1, 27)=5.14, p<.05). Therefore, the dependent variable was divided by topic and submitted to an independent t-test. However, no significant effect for medium was found. As interactions for medium, topic and gender were also found (F(1, 27)=5.75, p<.05), it was divided into four groups to conduct a further analysis, that is, general/male, general/female, personal/male, and personal/female. As a result, the main effect for the medium was found in the general/male group (p<.01). As Table 2 shows, in this condition, the JLLs' responses were rated as more felicitous in the text condition than in the voice condition. Furthermore, compared with males, the females' differences between voice and text conditions were much smaller. Finally, it seems that responses to the personal topics were more felicitous than the general ones overall.

	Voice		Text	
	General	Personal	General	Personal
Male	3.63(.06)	4.71(.32)	4.46(.06)	4.42(.62)
Female	4.42(.29)	4.56(.21)	4.56(.41)	4.72(.19)
Total	4.25(.43)	4.62(.26)	4.52(.44)	4.59(.32)

 Table 2. Average Scores of Felicity in JLL's Responses

Note: () is Standard Deviation.

Discussion

There were two purposes of this study. The first was to clarify Japanese language learners' verbal behavior styles when using cell phone text messages and voice messages to communicate with people they had never met before. As a result, it was demonstrated that there were no significant differences between text messages and voice messages in both politeness strategies and felicity of conversations. From these results, it can be said that these middle-high-level learners had comparatively high and equal levels in politeness strategies and felicity in their responses (the average scores in these two fields were as follows: males' were both 4.31, and females' were 4.58 and 4.57).

The second purpose of this study was to compare these results with references to obtain implications concerning aspects for future support and development. According to Mizuta et al. (2004), there were many misuses and lack of correct, polite expressions in beginner/ middle

level Japanese language learners' text messages. Ye et al. (2009a) clarified that there are more grammatical errors in text messages than in voice messages in middle-high-level learners' cell phone use. Given the fact that there was no difference in the middle-high-level learners' verbal behavior styles and that there were fewer Japanese grammatical mistakes in voice messages than in text messages, it can be inferred that there is the possibility of acquiring proper expressions and mastering felicitous politeness strategies of Japanese styles accompanying their progress in levels in both the text and voice communication mediums.

Additionally, in this study, no main effects for the media were found in either the politeness strategies or the felicity of the JLLs' responses. One of the main reasons for this result may be that the learners had acquired the skill of responding politely because the flow of the conversation had been decided, and they had learned the skill of making felicitous responses from the sender's awareness and viewpoint. Therefore, regardless of the necessity to type and choose suitable expressions in the text condition, the learners could respond felicitously and show their politeness in the text messages as in the voice messages.

Further, there were the main effects for gender in both the learners' politeness and felicity of their responses. In each case, the females' responses were rated higher than the males. This result may partly be due to their gender awareness that females should be more polite than males when they learn Japanese (e.g., Satake 2002, 2003), because there is no such difference in Chinese. The result may also be due, at least in part, to the female participants' Japanese language level being higher than the males overall. Thus, it is suggested that it is necessary to consider proper guidance and support to help Japanese language learners, especially male learners, to make correct politeness strategies and respond felicitously when communicating with people, especially with strangers, through cell phone text messages and voice messages.

Finally, there were the main effects for the topics in the felicity of responses. Compared with the general topics, the responses to the personal topics were rated more advanced. This result may be due partly to the Chinese learners' becoming used to those daily life topics, whereas they had few opportunities to communicate with Japanese native speakers about questions such as "advantage(s)/disadvantage(s) of Japan or Japanese" or "mutual understanding between Japanese and Chinese". Therefore, it was difficult to respond felicitously. From these results, it is suggested that it is necessary to examine the effects of various topics, including intercultural ones, in the future.

Conclusions

In sum, as there was no difference between cell phone text messages and voice messages in Chinese learners' Japanese verbal behavior styles, it is suggested that it is possible to make good use of voice messages to develop Japanese support systems in the future. In terms of text messages, learners may always depend on visuals. Thus, even if they could not recognize new Japanese words, they would be able to guess from the meaning of the Chinese characters. In this respect, practice through spoken language by auditory stimulus becomes highly important.

At the end of July 2008, MEXT (Ministry of Education, Culture, Sports, Science and

Technology) published a policy stating that Japan will aim to accept 300,000 international students by 2020. This goal demonstrates that supporting international students' Japanese education has become an urgent issue. As the possession rate of cell phones among international students is increasing, the question of how to use cell phones to develop support systems for Japanese language learners has become more and more important. Considering these facts, the results that the present study has demonstrated may have some implications for future research and Japanese education.

The present study analyzed the responses of Chinese international students. However, from the viewpoint of interaction, it is necessary to analyze both parties' conversations, which could be an issue for future research.

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