

JALT2007

Challenging Assumptions
Looking In, Looking Out

Learning English rhythm using the whole body

Tomoko Nakamura

Hiroshima International University

Reference data:

Nakamura, T. (2008). Learning English rhythm using the whole body.

In K. Bradford Watts, T. Muller, & M. Swanson (Eds.), *JALT2007 Conference Proceedings*. Tokyo: JALT.

My aim was to demonstrate the effectiveness of teaching four-beat English rhythm to low-proficiency EFL university students in Japan, who may be regarded as false beginners. Twenty-five students participated in 4 weeks of training to learn four-beat rhythms that I created. Speech analysis software was used to analyze the students' readings. The results of the training, as well as feedback from the students regarding this teaching method, suggest that it motivates false beginners to enjoy English classes and raises their awareness of English rhythm.

本論文は、日本語を母語とし、英語を外国語として学んでいる、英語熟達度の低い大学生(擬似初心者: false beginners)を対象に、4ビートの英語のリズムを教えた効果について論じる。独自に作成した4ビートのリズムを使用して、25名の学生に4週間の訓練をした後、音声分析ソフトを使用し、訓練前後の音読の変化を見た。実験後に実施したアンケートによれば、英語の嫌いな擬似初心者が、英語のリズムに気付き、英語の授業を楽しむための動機付けに効果があったことがわかった。

I examined the effects of a teaching method designed to help Japanese university students with low EFL proficiency – false beginners – learn four-beat English rhythm. These were students who could be observed in English classes apparently not enjoying the lessons. However, research indicated that most of them did enjoy listening to music. This finding led me to conduct an experiment exploring the use of music to teach English rhythm. I compared the reading performance of each student, before and after training, using a quantitative and a qualitative method. For quantitative analysis, I compared reading durations for a chant and for a prose passage. For qualitative analysis, I compared voice patterns. I also obtained, and will discuss, feedback from the students on this teaching method.

Theoretical background

The use of the whole body in the context of music is a key feature of this teaching method. Although it is generally accepted that the left hemisphere of the brain plays the lead role in language learning, neurolinguistic research shows that well-balanced activation of both hemispheres is effective in learning and engaging in various tasks (Buzan, 1976; Schuster & Vincent, 1980). I applied the whole brain approach to an oral English class attended by false beginners.

Eden (2004) and Haynes and Hook (2005) maintain that using a multisensory approach helps learners who have trouble decoding the meaning of individual words. Nakamura (1998) demonstrates that false beginners in EFL share this problem, i.e., the inability to recode and decode English words automatically. Saito (2003) presents an explanation of the use of the whole body for the purpose of teaching English. Moreover, many researchers and practitioners of language teaching, including Lozanov (1979), substantiate the usefulness of music in language classes. Therefore, I used a multisensory approach, involving both music and the learners' physical movements.

The phonological difficulties experienced by individuals who are unsuccessful in their efforts to learn a second language are attributable primarily to the interference of their first language (Kroll & de Groot, 1997). The basic difference between English, the target language, and Japanese, the mother tongue, is the presence of a stress accent on syllables in English and its absence in Japanese. In contrast, Japanese has a pitch accent with moras. In Japanese, each mora gets equal time, with no strengths and weaknesses, but with high

and low tones (Kubozono, 1993). Japanese EFL learners tend to read English sentences using Japanese phonology. I attempted to remedy this habit in this experimental training.

Questionnaire 1. Music and English learning

Prior to implementing the experiment, I distributed to first-year university students a questionnaire about music and learning English, with a view to confirming Nakamura's (2006) report regarding the usefulness of music for teaching English writing classes. My sample consisted of 100 students, 71% of whom reported disliking learning English; an equal proportion (71%) disliked English pronunciation. Moreover, 26% were not interested in learning English to begin with. Twenty-two percent had enjoyed English only in the first year of junior high school, when they first started taking English lessons at school. Most respondents reported (answering an open-ended question) that the burden of learning and memorizing vocabulary and grammar was the cause of their unwillingness to study English.

Despite these responses, however, 54% of the students were ready to accept English teaching methods that might improve pronunciation. Also of great interest, 97% liked listening to music. Fully 78% of the students not only enjoyed the experience of passively listening to music, but also expressed interest in the lyrics of English songs. Eighty-four percent of the sample liked JPop, a type of music in Japan that is popular among the younger generation. Fifty-two percent liked hip-hop. Moreover, 54% of the respondents liked exercising, i.e., physical movement. On the basis of these results, I devised and assessed a new method for teaching them English.

Creating rhythm patterns

Using the software *Macintosh Garage Band*, I created four kinds of rhythm patterns: Exercise rhythm, Pop rhythm, Pop and Rock rhythm, and an original rhythm resembling hip-hop, “Higaki01” (named after Yuho Higaki, its creator and one of my students), in recognition that the students had ranked JPop, hip-hop, and rock as their favorite genres of music.

Lyrics were taken from Carolyn Graham’s Jazz Chants: “Major Decisions,” “My Feet Hurt,” and “Wake up! Wake Up!” The words of these chants have clear four-beat accents and phrases that are easy for false beginners to practice. This selection seemed appropriate, given that JPop, the foremost favorite among the students, also has four-beat rhythm.

Experimental method

The participants were 25 lower-level students whose TOEIC scores were 300 or below. The study was conducted during a once-weekly 4-week English class (Oral English I, which met in a Personal Computer Language Laboratory). On the first and fourth weeks, participants took pre- and post-tests, respectively, regarding their ability to read the words of “Major Decisions” and a passage selected from STEP 3 (Society for Testing English Proficiency, 1999 junior high school graduate level interview test). During the 4 weeks of class, participants engaged in the following activities:

1. Repeating the teacher’s model reading: This task should be used when the participants are lower-level students so that the teacher can demonstrate the pronunciation of each word and convey an understanding of the meaning of the chant.
2. Deep breathing: This is a practice of abdominal breathing whereby students place their hands on their abdomens and breathe out using the lower part of the abdomen. After subsequently breathing in, students hold their breath for 1 second and say “I,” /ai/, while breathing out. This is designed to address the difficulty Japanese students have dealing with diphthongs, which they cannot pronounce clearly.
3. Shaking shoulders: Students move their shoulders up while breathing in, and down while breathing out. This exercise aims at reducing tension.
4. Moving the body up and down to music: Students stand on their feet, which are placed flat on the floor at shoulders’ width apart, and move their bodies by bending the knees up and down. This exercise aims at relaxing the shoulders.
5. Walking to music while reading the words aloud: Students walk on the spot.
6. Working on sentence stress kinetically: Students work in pairs. They clasp hands, as if to shake hands in greeting. They then take turns reading a sentence from a white board while moving their clasped hands in a circle to match the sentence stress of what they are reading, the stress coming at the bottom of this circle.
7. Recording their readings of a chant and of the STEP 3 passage.

Results

The analysis was restricted to the data provided by respondents who attended every class for 4 weeks ($n = 13$). Quantitative and qualitative analyses were conducted for the following research questions, respectively: How much improvement in reading time did the participants achieve? To what extent was English rhythm learned?

Quantitative analysis

Table 1. Reading duration for “Major Decisions” ($n = 13$)

Test	Mean duration (seconds)	Standard deviation
Pre-training	39.846	3.738
Post-training	33.462	2.845

There was a significant difference in the reading duration for “Major Decisions” before and after training [single-factor analysis of variance (ANOVA): $F(1, 12) = 38,061$, $p < 0.001$]. Thus, it is clear that participants improved their reading time by the end of the training.

Table 2. Reading duration for the passage from STEP 3 ($n = 13$).

Test	Mean duration (seconds)	Standard deviation
Pre-training	62.692	16.596
Post-training	55.769	11.794

There was no significant difference in the reading duration for the STEP 3 passage before and after training [single-factor ANOVA: $F(1, 12) = 1.993$, $p = 0.1834$]. Thus, the reading time for the STEP 3 passage did not improve.

Qualitative analysis

An examination of voice patterns was necessary to ascertain the degree to which students successfully learned English rhythm. Before and after the training, participants read the words of “Major Decisions” and the STEP 3 passage, recording themselves in MP3 digital audio encoding format. Using the software *Amadeus II*, we then reproduced the voice patterns in the form of diagrams that we saved in PDF files. We then compared the prosodic changes in the participants’ voice patterns before and after training and with those of native-speakers of English.

The voice pattern diagrams are a visual means to demonstrate strengths and weaknesses. This seems especially helpful in teaching lower level students to grasp pronunciation, as well as to demonstrate the native model of English rhythm. In addition, observations during the training indicated that visual signs of improvement encouraged the practicing of pronunciation.

For example, the sound waves for the first part of “Major Decisions,” read by Carolyn Graham, are regular (Figure 1): “How do you like your coffee? Black! Black!” For contrast, I show a typical pattern of Japanese students’ English reading of “Major Decisions” before the training (Figure 2). The students’ voices are low and there is a lack of confidence in the English pronunciation. I hypothesize that they may

not have spent enough time practicing voice exercises in high school English classes. Moreover, I infer that they read English sentences following Japanese phonological rules.

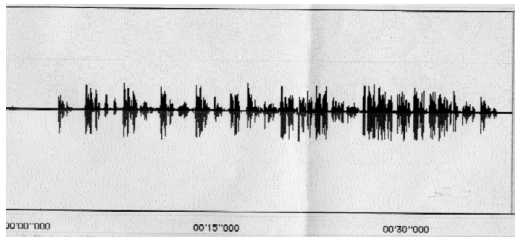


Figure 1. Carolyn Graham's voice pattern, reading "Major Decisions" (35 s).

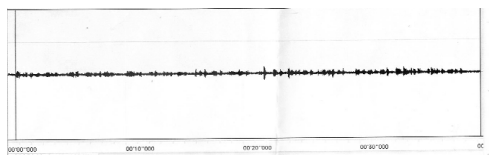


Figure 2. Participant 1021's pre-training voice pattern, reading "Major Decisions" (38 s)

After the training, the students' sound waves (Figure 3) are still nowhere near as regular as those of Carolyn Graham's model, but the students do seem to have an increased awareness about the strengths and weaknesses of sounds.

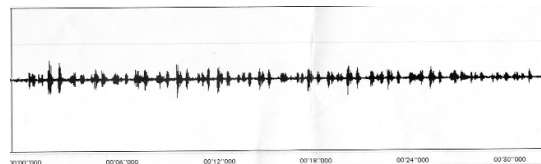


Figure 3. Participant 1021's post-training voice pattern, reading "Major Decisions" (30 s)

I assumed that improved familiarity with English reading that students had gleaned from the chants might also be applied to the reading of prose (Figure 4), which should involve a regularity of stress akin to Carolyn Graham's reading of a chant.

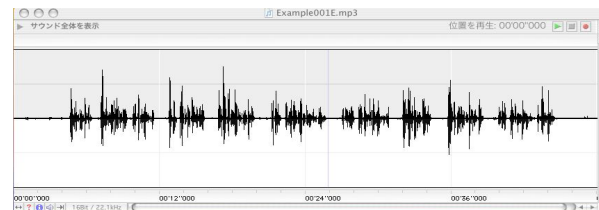


Figure 4. Voice pattern of a native speaker of American English, reading the STEP 3 passage (40 s)

For all participants during the first reading of the STEP 3 passage, there were no stress-timed rhythms, just as if they were reading a passage in Japanese (Figure 5). By the end of the training, some participants did raise their awareness of English rhythm, at least slightly (Figures 6). Although not

all participants attained the level shown in Figure 6, these examples do demonstrate the possibility that false beginners can improve stress-timed rhythm through training.

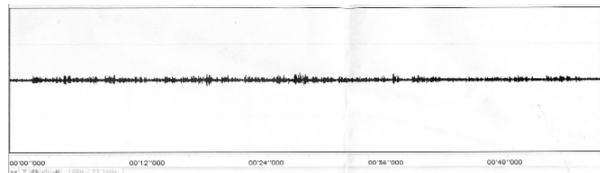


Figure 5. Participant 1035's pre-training voice pattern, reading the STEP 3 passage (55 s)

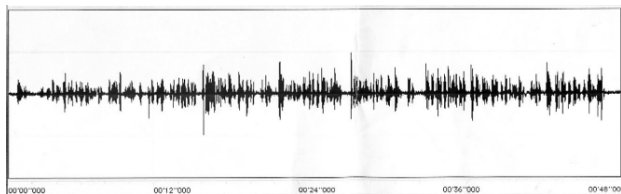


Figure 6. Participant 1035's post-training voice pattern, reading the STEP 3 passage (48 s)

Discussion

I used quantitative analysis to determine the degree to which participants improved their reading time by the end of training. Phonological recoding and decoding (or word vocalization: Ito, 1976) represent the major obstacles encountered by new learners of a second language. Nakamura (1998) assumed that the backsliding

of false beginners might start at the very beginning of language learning (i.e., during the acquisition of word vocalization skills). An improvement in reading times can imply improved automaticity of single word processing, a prerequisite for Japanese EFL learners to pass smoothly from the beginner to the intermediate level.

Data regarding the reading times for the words of the chants and of the STEP 3 passage were inconsistent. More than 92% of the participants improved their reading times for the words of “Major Decisions” – there was a statistically significant improvement as at the end of the training. However, there was no matching improvement in reading times for the STEP 3 passage – only 64.3% of the participants improved.

This result tends to rebut my hypothesis that training using rhymes such as jazz chants would also work for prose. It appears that, due to irregularities in the rhythm of the prose, students could not apply the four-beat rhythm, even though the sound patterns for the prose do resemble those for the chant when read by native English speakers (see Figures 1 and 4).

An ability to read words fast may be one of the most important factors contributing to fluency in the target language, although it is, of course, not sufficient. Learning the prosody of the English language in order to understand the meanings and emotions conveyed by the words (Graham, 1978) is also necessary. However, the voice patterns shown in Figures 2 and 5 represent typical examples of pronunciation among Japanese learners of the English language: I found no evidence of the stressed and unstressed syllables that are essential for English pronunciation.

During the experiment, participants showed hesitation when required to move their bodies to the four-beat rhythm. This is consistent with the social self-consciousness and focus on peer acceptance typically shared by young adults. I hypothesize that this hinders such young adults from expressing their feelings as freely as expressed by children.

Prior to the experiment, I volunteered to teach a 4-month English class for children. The class consisted of children aged 7 to 12 years who had various levels of English language competence, ranging from true beginners to eighth-graders who preferred activities to studying English in a junior high school classroom. Consistent with the assumption that children learn a language using their bodies (Masataka, 2001), they enjoyed activities with music and learned quickly.

I also volunteered to teach English to disabled learners, including some afflicted with developmental disabilities, autism, and Down's syndrome. These participants expressed their joy of learning using their whole bodies. Indeed, children and the disabled seem to have something in common: Physical movement accompanies language acquisition.

Children develop their language skills with physical movement (Masataka, 2001). Young adults, however, have spent 6 years studying English mainly from texts. This may be one reason why this approach did not seem as successful with the young adults as with the other two groups. In particular, many teachers report disappointment at the reluctance with which low-proficiency adults at university show any enthusiasm for learning English in class – instead they seem to be embarrassed. The aim of the activities

introduced in the experiment was to let false beginners recognize that they could easily learn English rhythm in a fun way, using their bodies, like children.

Feedback from students

In an effort to understand the reactions of students to the experimental method under study, questionnaires regarding the usefulness of this training were distributed. Forty-eight percent of the sample responded that the training was fun. On this basis alone, however, I cannot determine whether the training was useful. In response to a question about their favorite chant, students responded that practicing “My Feet Hurt” was their favorite activity, explaining that this was because the words from the chant had the clearest rhythm and that the chant was easy to follow. They said that “My Feet Hurt” and “Major Decisions” were easier than “Wake up!” Some of the phrases in the latter chant have irregular patterns, causing difficulty for the participants.

Fifty-six percent of participants said that they could get the four-beat rhythm easily from the chants, but only 40% said that they joined in the activities positively. Considering their learning style during 6 years at high school, i.e., studying English mainly from texts, I surmise that they may have felt uneasy when they had to follow an unfamiliar teaching method. Despite this, however, 56% said that the experimental method was effective, and 64% said that the exercises enhanced their pronunciation. I did not explain in Japanese what each chant meant, but 80% of students said that they understood the content. It should be noted that the vocabulary used in the chants and in the STEP 3 passage is at the ninth-grade level. In addition, prosody, including

rhythm and tone of voice, may have helped to convey the meaning of the text.

In response to an open-ended question about possible improvement in the training, some suggested that the use of pop songs would enhance enjoyment. I intentionally did not use songs because I thought that students who could not carry a tune would not enjoy singing. I was concerned that forcing the participants to sing might cause more embarrassment and burden.

Directions for future research

First, it is clear that a longer period of training is necessary. During this 4-week experiment, 30 minutes were spent in a once-weekly 90-minute class. If the participants had longer training periods, the voice patterns would show more significant improvement.

Second, I assumed that if students learned a four-beat rhythm using the words from chants, they would apply this skill to the reading of prose. However, the application of a four-beat rhythm to prose reading is still a question for future research.

Finally, several activities (e.g., exercising, walking to music, and pair work) were tested to ascertain their effect on the learning of English rhythm. At this point, no conclusions can be reached, and future experiments will need to address this question.

Acknowledgements

I am grateful to my colleague, Donald Cherry, for letting me share his teaching method, pair work for learning English rhythm, and his reading of a STEP 3 passage aloud. I also wish to thank Yuho Higaki, one of my students, who volunteered to teach English to children and to conduct the experiment together with me, making use of his knowledge of music.

Tomoko Nakamura has been with Hiroshima International University since 2002. She is currently interested in methods for teaching English to false beginners in Japan. <tnakam@he.hirokoku-u.ac.jp>

References

- Buzan, T. (1976). *Use both sides of your brain*. NY: Dutton.
- Eden, G. (2004). Developmental dyslexia in the United States of America. Oral presentation at RIKEN BSI and Oxford-Kobe Seminars, Joint International Symposium.
- Graham, C. (1978). *Jazz chants*. NY: Oxford University Press.
- Haynes, C. W., & Hook, P. E. (2005). What are the characteristics of effective reading instruction? *Journal of the Japanese Academy of Learning Disabilities*, 14(1), 63-71.
- Kubozono, H. (1993). *The organization of Japanese prosody*. Tokyo: Kuroshio Publishing.

- Kroll, J. F., & de Groot, A. M. B. (1997). Lexical and conceptual memory in the bilingual: Mapping form to meaning in two languages. In A. M. B. de Groot, & J. F. Kroll (Eds.), *Tutorials in bilingualism: Psycholinguistic perspectives* (pp. 169-199). New Jersey: Laurence Erlbaum Associates.
- Lozanov, W. (1979). *Suggestology and outlines of suggestology*. New York: Gordon and Breach.
- Nakamura, T. (1998). What makes language learners false beginners? Data analysis of word vocalization performance. *Annual Review of English Language Education in Japan*, 9 149-157.
- Nakamura, T. (2006). Activating unconscious and conscious functions in pre-based activities for false beginners' writing class. *Journal of Language and Culture*, 9. The Graduate School of Language and Culture, Hiroshima Jogakuin University. 103-126.
- Schuster, D. H., & Vincent, L. (1980) Teaching math and reading with suggestion and music. *Academic Therapy*, 16(1), 69-72.
- 伊藤嘉一 Ito, K. (1976) 「読解技能の指導」(Teaching reading skills) 『講座 新しい英語教育3』(New English Education) 大修館 (Taishukan) 92-111.
- 斎藤孝 Saito, T. (2003) 『からだを揺さぶる英語入門: Moving English』角川書店 (Kadokawa).
- 正高信男 Masataka, N. (2001) 『こどもはことばをからだで覚えるーメロディーから意味の世界へ』(Infants become articulate using their bodies) 中央公論社 (Chuokoronsha).

Appendix 1

The chants

Major Decisions (Graham 1978)

HOW do you like your | COffee? | BLACK! | BLACK!
 HOW do you like your | TEA? with | LE.mon, | PLEASE.
 HOW do you like your | STEAK? | ME.dium | RARE.
 HOW do you like your | EGGS? I | don't|CARE!
 SUN.ny-side|UP? I | don't | CARE!
 POACH.ed on | TOAST? I | don't | CARE!
 SCRAM.bled, with | BAcon? I | don't | CARE!
 O.ver | EAS.y? I | don't | CARE!
 SOFT-boiled? | HARD-boiled? I | don't | CARE!
 HOW about an | OM.ilet? | don't | CARE!
 COME on, | TELL me! THIS | isn't | FAIR.
 I TOLD you the | TRUTH. I | REALLY don't | CARE!

My Feet Hurt (Graham 1978)

My FEET | HURT! | TAKE off your | SHOES!
 My FEET | HURT! | TAKE off your | SHOES!
 My FEET | HURT! | TAKE off your | SHOES!
 My FEET | HURT! | TAKE off your | SHOES!
 It's HOT in | HERE! | TAKE off your | SWEAT.er!
 It's HOT in | HERE! | TAKE off your | SWEAT.er!
 It's HOT in | HERE! | TAKE off your | SWEAT.er!
 My FEET | HURT! | TAKE off your | SHOES!

It's COLD in | HERE! | PUT on your | SWEAT.er!
 It's COLD in | HERE! | PUT on your | SWEAT.er!
 It's COLD in | HERE! | PUT on your | SWEAT.er!
 My FEET | HURT! | TAKE off your | SHOES!
 My HAND.s are | COLD! | PUT on your | GLOVE.s!
 My HAND.s are | COLD! | PUT on your | GLOVE.s!
 My HAND.s are | COLD! | PUT on your | GLOVE.s!
 My FEET | HURT! | TAKE off your | SHOES!

Wake up! Wake up! (Graham 1978)

Wake UP! | Wake UP! What | TIME is | IT?
 Wake UP! | Wake UP! What | TIME is | IT?
 It's TIME to get | UP. What | TIME is | IT?!
 It's TIME to get | UP. What | TIME is | IT?
 COME on, | get UP. | I DON't want to | get UP.
 COME on, | get UP. | I DON't want to | get UP.
 You HAVE to | get UP! | I DON't want to | get UP.
 You MUST | get UP! | I DON't want to | get UP.
 You've GOT to | get UP! | I DON't want to | get UP.
 COME on, | get UP. | I DON't want to | get UP.
 Get UP! | Get UP! | YOU're going to be | LATE
 LATE for | WHAT? | LATE for | WORK.
 LATE for | WORK? | IT's | SUN.day!

Appendix 2

A passage for the STEP 3 interview test, 1999

KEN is |IN.terested in | SPACE | TRA.vel.
 He OFTEN | WATCH.es | NEWS about it on | TV,
 and READS | BOOKS and | MAGA.zines, | TOO.
 LAST week, | he WATCH.ed a | SPE.cial program on | TV.
 IT was about a | Japa.NESE scientist and a | SPACE | SHU.ttle.
 In the PRO.gram, | he was comMU.nicating with |
 AME.rican space scientists in | ENG.lish.
 SPEAK.ing English is as | impOR.tant as studying |SCI.
 ence, Ken |THOU.ght.
 So, he decide.ed | to study ENG.lish | VERY | HARD.
 Now, he is pLAN.ning | to VIS.it the | SPACE Center in |
 FloRIda.
 In the FU.ture, | he WANTs to become a | SPACE | SCI.entist,
 and | FL.y in the | SPACE | SHU.ttle.

Appendix 3

Questionnaire 1. Music and learning English

1. Do you like music?
1) Yes. 2) No. 3) Neither.
2. Do you like singing?
1) Yes. 2) No. 3) Neither.
3. Have you ever been interested in lyrics of English songs?
1) Yes. 2) No. 3) Neither.
4. Have you ever sung English songs?
1) Yes. 2) No. 3) Neither.
5. What kind of music do you like to listen to? (You can check more than one choice.)
 - 1) Classical music
 - 2) JPOP
 - 3) Rock music
 - 4) hip-hop
 - 5) songs for animation
 - 6) Jazz
 - 7) Ska
 - 8) Folk songs
 - 9) Military songs
 - 10) Heart healing music
 - 11) Trance
 - 12) Foreign folk music
 - 13) Japanese Enka
 - 14) Gagaku
 - 15) Others ()
6. Are you good at English pronunciation?
1) Yes. 2) No. 3) Neither.
7. If there were learning materials to improve English pronunciation, would you like to use them?
1) Yes. 2) No. 3) Neither.
8. Do you have any special tunes you really like?
1) Yes. 2) No. 3) Neither.
9. Do you like physical exercise?
1) Yes. 2) No. 3) Neither.
10. Until when did you think learning English was fun?
 - 1) Still now, I think English is fun.
 - 2) Until (1st, 2nd, 3rd) year at senior high school
 - 3) Until (1st, 2nd, 3rd) year at junior high school
 - 4) Until (the lower, higher) grades at elementary school
 - 5) Before the above mentioned times
 - 6) It wasn't fun, even from the beginning
11. Why did/do you feel that learning English was/is not fun? (An open-ended question)

Appendix 4

Questionnaire 2. Feedback from students

1. Did you enjoy the experiment?
1) Yes. 2) No. 3) Don't know.
2. Which tune or chant did you like or was easy for you to practice?
1) Exercise 2) Major Decisions 3) My Feet Hurt 4) Higaki01
3. Which chant was the easiest to tap out the rhythm of?
1) Major Decisions 2) My Feet Hurt 3) Wake up!! Wake Up!!
4. Which chant was the most difficult to tap out the rhythm of?
1) Major Decisions 2) My Feet Hurt 3) Wake up!! Wake Up!!
5. Could you read the chants to a four beat rhythm?
1) Yes. 2) No. 3) Don't know.
6. Could you participate in the experiment actively?
1) Yes. 2) No. 3) Don't know.
7. Do you think the passage you read aloud was easy or difficult?
1) Easy 2) Moderately difficult 3) Difficult
8. Do you think that the training was effective for your second reading of the passage?
1)Yes. 2) No. 3) Don't know.
9. Do you think exercising helped you to pronounce English easily and enthusiastically?
1)Yes. 2) No. 3) Don't know.
10. Could you do it understanding the content of the chant?
1)Yes. 2) No.
11. Do you have any opinions about how we can improve the activity?
1)Yes. 2) No.
12. *(For those who answered "Yes" to the question above)*
What do you think should be improved? (You can check more than one choice.)
1) Selection of a chant
2) The procedure of experiment
3) Pronunciation
4) The content of material
5) others
13. Feel free to write your opinions if any. *(An open-ended question)*