

An Examination of Listening Acquisition: A Study of Japanese University Students

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Abstract

English language learners seek strong speaking, reading, writing, and listening skills. When it comes to the last it is commonly assumed that if students have many opportunities to hear spoken English then that exposure will improve their ability to comprehend it. Unfortunately, this is often not the case since many second language learners do not get the opportunity to develop their listening skills naturally. Despite this, classrooms dedicate little to no time in English for Academic Purposes coursework towards listening strategies and techniques. One strategy which has shown to be effective is “connected speech”. Students learn how to hear the connection between words that native speakers develop naturally. In the Fall 2016 (September 16 – December 15), 43 students were the subject of a class dedicated to training their listening skills to identify this technique. A pre-test and post-test control group design analyzed listening interventions on listening fluency among English for Academic Purposes students. An independent *t-test* was used to measure the mean average scores on the listening section of the treatment group’s Test of English as a Foreign Language exams (n=35) taken in December 2016 and were compared to scores taken in April and September 2016 (n=37). The treatment group saw mean gains of +3.03, findings that were significant. The research also compared Test of English as a Foreign Language results taken in April and September 2015 (n=38) to those taken in December 2015 (n=29). Students had slightly higher mean gains of +3.65, also significant, perhaps indicating other variables may have led to similar findings.

Keywords: listening fluency, connected speech, Japan, ESL students, TOEFL

Introduction

At Akita International University (AIU) in Northwest Japan, students are required to study one-year abroad at one of the school's 185 partner-universities as all coursework at AIU is taught in English. To qualify, learners must demonstrate proficiency in all learning domains by scoring 550 or higher in the Test of English as a Foreign Language (TOEFL). Though most succeed, some students are left repeating English for Academic Purposes (EAP) coursework and having to retake the TOEFL exam term after term in the hope of overcoming another milestone towards graduation.

One learning domain which often gets ignored is listening. Some instructors take a prescriptive approach to teaching listening skills by inserting a compact disc into a player and instructing students to shadow, transcribe, or just listen. Other past colleagues have abandoned this approach to teaching, complaining that the practice is pedagogically ineffective. Perhaps one reason we do not emphasize listening in the classroom is that it remains the most obscure and least understood among the four learning domains.

Research has shown that learners need to have effective strategies and techniques to become sufficient listeners. Chamot (1995) argued there is a significant relationship between strategy use and proficiency. However, many learners are unaware of how to improve their listening comprehension skills especially when confronted with the speed of spoken English produced by native speakers. Some teachers also purposely enunciate words or slow their speech down to facilitate the learner which will hinder development for students or cause them to listen to materials pronounced clearly and distinctly. As a result, from unfamiliar patterns of discourse to speech rates, to prosody, to vocabulary, learners face many challenges (Cross, 2009).

One listening strategy known to be effective is “connected speech” – a process in which students learn how to listen to the connection of words that native speakers develop naturally. The result, students become strategic listeners of English by understanding and anticipating the connection of words that take place in spoken English. The implementation and understanding of this learning strategy could be a key component in the success of not only improved listening for language learners, but also increased scores in TOEFL. Therefore, this current research hopes to shed light on how much listening time is necessary for students to make significant strides in this learning domain.

Literature Review

Among the four learning domains, listening is arguably the most complex. In fact, listening is the first encounter with the target language in a student's endeavor to acquire a new language (Berne, 2004). Dunkel (1993) argued the listening process is highly complicated; it is hard for a single instrument to measure all aspects of listening comprehension.

To make the classes student-centered, songs have been incorporated into classrooms by teachers with the idea that classes become active and fun. Though singing can be creative, helps to build rhythmic patterns and taps into a particular culture, it can be argued the use of singing to develop a second language (L2) improves speaking skills more than it does listening. Also, it becomes a challenge for the instructor to find songs universally appealing. Sometimes understanding the lyrics sung by the artist can be problematic even to a native-speaker of English. Lastly, the use of songs to improve listening skills might be left best for those with a musical background.

Studies have shown listening comprehension is broken down into three stages. The first involves perceptual processing, the encoding of the spoken message. The second stage is the mental representation of the sentences or the parsing of words. The last is the understanding of meaning known as the utilization stage. In essence, learners will react specifically to whether the spoken words are a question, a statement or a command (Anderson, 2009). This cognitive psychological approach is an alternative to the top-down and bottom-up process to listening comprehension, but some researchers have argued whether this strategy improves a learner's listening ability. Ridgway (2000) makes the point it is difficult for second-language learners to implement taught strategies while listening simultaneously.

One research study investigated the consequences of simultaneously reading and listening to the same material while learning English as a foreign language. It found that the redundancy of performing both tasks at the same time likely interferes with the learning, concluding when redundancy is added to the learning, the brain is used unnecessarily to attend to both sources of information (Moussa-Inaty, Ayres & Sweller, 2011). This additional process generates what cognitive load theorists call extraneous cognitive load, meaning too much unnecessary information is being memorized. By eliminating redundancy, the brain could be freed up to recall salient aspects of the lesson which helps to improve listening but the results showed no significant improvement in the other domains.

A study of Malaysian students emphasized listening instruction methods based on process-oriented approaches instead of product driven methods, placing a premium to facilitate the learner. During think-aloud sessions, the researcher would notate the students' overt listening behavior. By using an observation matrix, the information provided a tacit understanding of the listeners' problems and issues (Nair, Koo & Abu Bakar, 2014). The aforementioned is helpful to determine that change may be necessary to a specific curriculum but says nothing about which teaching methodology would be best to improve the program.

Another approach gaining popularity in the classroom is strategy-based instruction (SBI). SBI is a method of teaching in which strategies are selected for intensive learning in the classroom. These strategies can include comprehension, monitoring, predicting, clarifying and summarizing. SBI has two main elements: 1) Students are taught how, when, and why strategies are used to facilitate language acquisition and 2) strategies are integrated into class materials and are embedded into the language task (Cohen, 2000).

SBI is often ignored in Japan since Japanese teachers of English (JTE) teach the learning domains they feel comfortable with. In fact, Japan's education system is well known for its prescribed curriculum and high-stakes exams. Additionally, instead of teaching English "in" English, it is often taught in Japanese. Even at the university level, there is a common belief that the opportunity to hear spoken English improves comprehension naturally. Perhaps teachers do not appreciate the difficulty that students face when confronted with the speed of spoken English produced by native speakers. It becomes a challenge for students who have had little to no exposure to natural English (Rosa, 2002), as is the case for the vast majority of Japanese students who attend Akita International University (AIU).

The Research Study

The study investigated the impact of interventions on listening fluency between Japanese students taking an 80-minute listening class over the course of one semester in Fall, 2016. A

mixed-method research approach with a pre-test and post-test control group design was used. There was also a post-research survey.

Participants

Participants were first-year students at AIU taking Level 3 coursework in EAP as shown in Table 1. To help students increase the listening section of their TOEFL exam scores, participants in the Fall, 2016 term attended a strategy-based class. This class was held for 80 minutes every week in order to develop the ability to identify ‘connected speech’, where students learned how to hear the connection between words that native speakers develop naturally. The question remains how much exposure students need before there is a significant improvement in listening comprehension. Forty-three Level 3 students were the participants for this research by taking one semester of a listening fluency class emphasizing the use of this strategy. Participants attended the class for 15-weeks.

Table 1: EAP Level Placement

EAP Level	TOEFL Placement Score
Level 1	479 or lower
Level 2	480–499
Level 3	500 or higher

Instruments

Two episodes from the fifth season of *Friends* were chosen. They included *The One Where Ross Can't Flirt*, and *The One with Ross's Sandwich*. Students were also given deleted transcripts of those episodes for transcribing purposes as shown in Appendices A and B. The aim was expose students to the speed of spoken English with the following questions in mind:

- Does a weekly listening fluency class over the course of 15-weeks totaling 20 hours, significantly increase TOEFL listening scores?
- Are TOEFL listening scores taken in December 2016 significantly higher compared to scores taken in April and September 2016?
- How do the results above compare to students' scores from the year before?

Common listening instruments such as BBC News or other news programs were purposefully avoided since the proper enunciation of words is emphasized to facilitate the listener. Also, in the listening section of TOEFL the majority of questions are dialogue-based, testing the student's understanding of meaning or implication.

Methods

The listening portion of the participants' TOEFL exams was compared to Fall, 2015 students who did not receive the intervention. Level 3 participants in Fall, 2016 learned the connection patterns shown below:

1. Same consonant combination – students say one consonant sound as highlighted and underlined in bold.
 - Where is the **bus** stop
 - I'll meet you **at** twelve o'clock.

2. Different consonant combination or consonant ending sound – execute the glottal stop. For Japanese students, *hot dog* in *Katakana* (one component of the Japanese writing system for the transcription of foreign loan words) is pronounced *ho-tu do-gu*. By executing the glottal stop, a four syllable compound noun is reduced in half. For the second example, *nice dress* is a simple adjective/noun combination with each word containing one syllable. In *Katakana*, this adjective/noun combination is pronounced *na-i-su do-ri-su*, each word containing three syllables.
 - I ate a **hot d**og for lunch.
 - That is a **nice d**ress you're wearing.
3. Consonant vowel combination or consonant ending sound – visualize as one word
 - Can you **turn on** the lights?
 - I will **take out** the trash.

By visualizing **turn on** as **turnon**, the first syllable break occurs after the letter /r/ as underlined in bold. In the second example, **take out** becomes **takeout**, the first syllable break occurs after /a/ as underlined in bold, essentially reading these phrasal verbs in the following way: tur non, ta keout.

The activity involved watching episodes of the television show *Friends*. Each conversation would be played three to four times. While listening, students were instructed to dictate as much as they could comprehend on the deleted transcripts as shown in Appendices A and B. They were then asked to read aloud back to the teacher to demonstrate how much of the conversation they were able to pick up. The instructor wrote down the words repeated by the students using Microsoft Office on a projector screen for students to see. If words were missing, the students got additional attempts to listen to the dialogue. Once all the words were correctly identified, they were then instructed to demonstrate connected text. Afterwards, the teacher read each dialogue aloud with students reading and repeating. Each reading was delivered faster and faster, the idea being reading old material allows the students to read and hear the speed of spoken English. The exercise would finish by having the students hear the spoken dialogue from the sitcom one last time, so they could compare the rate of spoken English before and after the “connected speech” was identified before moving onto the next dialogue.

An independent *t-test* was used to measure the progression of both the treatment and the control group using the software Statistical Package for the Social Sciences (SPSS) to answer the three hypotheses aforementioned.

A post survey using a five-point Likert scale (5: Strongly Agree; 4: Agree; 3: Neutral; 2: Disagree; 1: Strongly Disagree) was administered to ascertain students’ attitudes about whether or not the listening class helped to improve listening comprehension (see Appendix C).

Participants answered one additional question asking in which week they noticed a significant difference, if any, in improved listening comprehension.

Results

The purpose of this research was to determine if 20 hours of listening class time utilizing “connected speech” would significantly improve the listening section of TOEFL. The participants’ mean listening scores taken shortly after the end of the fall term, in late

December, were compared to their mean scores taken in April 2016 or September 2016. Students who took their exams in April 2016 would have been Level 2 students in EAP who had matriculated up to Level 3. September 2016 students would have been first-semester students who took the exams about a week before the beginning of the fall semester to determine EAP placement. Those scores were compared to students who took the TOEFL the year before.

Table 2 is used to show the mean difference between pre-test and post-test scores. Exams taken in April and September 2016 ($M=50.05$; $SD=4.42$) were compared to exams taken in December 2016 ($M=53.08$; $SD=3.93$). With an alpha level of .05 and a df of 70, and with equal variances assumed, December exams had a mean gain of +3.03 compared to April and September exam scores; $t(71)=3.03$, $p=.003$. Based on the findings, the growth based on post-test scores of the treatment group is significantly higher compared to pre-test scores.

Table 2: Independent measures *t*-test Pre-test/Post-test 2016

Group	N	Mean Gains	Std. Deviation	Std. Error Mean		
Apr/Sept 16	37	50.05	4.42	.727		
Dec. 16	35	53.08	3.93	.665		
95% confidence level						
t	df	sig.(2-tailed)	Mean Diff.	Std. Error Diff.	Lower	Upper
3.06	70	.003	3.03166	.989	-5.005	-1.058

Table 3 shows mean scores between April and September 2015 ($M=49.55$; $SD=6.0$) versus scores taken in December 2015 ($M=53.20$; $SD=3.65$). Based on the findings, with an alpha level of .05 and a df of 62.28, the null hypothesis was rejected because the t score value fell within the critical region. The conclusion is that the growth based on the post-test scores is also significantly higher compared to pre-test scores. December 2015 scores had mean gains of +3.65; +.62 gain compared to December 2016 scores; $t(66)=3.07$, $p=.003$.

Table 3: Independent measures *t*-test Pre-test/Post-test 2015

Group	N	Mean Gains	Std. Deviation	Std. Error Mean		
Apr/Sept 15	38	49.55	6.00	.973		
Dec. 15	29	53.20	3.65	.679		
95% confidence level						
t	df	sig.(2-tailed)	Mean Diff.	Std. Error Diff.	Lower	Upper
3.07	62.28	.003	3.65	1.18	-6.02	-1.28

Discussion

Despite significant improvement in the listening section of TOEFL taken by students at the end of December 2016, students who took exams in December 2015 also witnessed significant gains. The research concludes the listening fluency class for the treatment group was not the primary reason for increased exam scores. Other variables such as EAP coursework, an English-speaking environment in which 20-percent of students come from overseas, a facility providing students with movies, books, educational software and other materials likely contributed to significant gains in listening. Accordingly, this analysis has

shown that 20 hours of intervention over 15-weeks is likely not enough time to make significant gains in TOEFL listening.

The research parallels a study of fifteen Japanese students who received slightly less intervention compared to the current study and were also part of a quasi-experiment. Participants received 90-minutes of listening intervention by watching a BBC news website over 10-weeks totaling twelve hours (Cook, 2009). The participants self-selected one of two Current Affairs classes forming the experimental group (EG) of seven students and a comparison group (CG) of eight students. EG received 90-minutes of strategy instruction appropriate to the given listening task. Despite significant gains by both groups between pre-test and post-test scores, the independent *t-test* did not indicate a significant difference between the two groups (Cook, et al, 2009).

On the basis of these findings, it is evident that TOEFL should not be the only indicator of improved listening comprehension since this learning domain remains largely ambiguous (Alderson & Bachman, 2001). In support of this, a quantitative non-experiment was conducted seeking the attitudes of the treatment group on a five-point scale (5-Strongly Agree; 4-Agree; 3-Neutral; 2-Disagree; 1-Strongly Disagree).

Table 4: Survey Questionnaire Results

Survey Questions	Mean Score
Connected Speech increased my ability to listen to the speed of English.	4.1
The listening fluency class improved my ability to comprehend English.	3.98
The listening fluency class is an effective way to increase listening comprehension.	3.87
The listening fluency class increased my ability to understand spoken English with a native speaker.	4
The listening fluency class increased my ability to understand American humor.	4.2
The listening fluency class increased my ability to understand idiomatic expressions.	3.92

The results show the vast majority of students believed the listening fluency class improved their listening skills as shown above in Table 4. When asked if the class improved their ability to hear spoken English, the mean score was 4.1 on a five-point scale. When asked if it improved their comprehension, the results were also high with a mean score of 3.98. Additionally, students were asked to estimate in which week they began to notice a significant difference in listening comprehension. Students were invited to circle the answer closest to their experience as shown in Appendix C. No student noticed any significant difference between weeks 1 and 3. However, 90 percent of students answered they noticed a significant improvement during the term with the largest percentage (33%) reporting gains between weeks 7 and 9, as shown in Table 5”.

Table 5: Significant Listening Improvement Gains

Weeks	Percentage
1-3	0%
4-6	10%
7-9	33%
10-12	13%
13-15	15%
No difference	10%

In consequence, it could be that learners were unfamiliar with the topic itself in TOEFL and may have come across too many unfamiliar words to understand the recording. Moreover, a large portion of the listening section requires that the listener understand intent as information itself is often not enough. Test-takers must negotiate the speakers' attitudes, the setting, and be able to anticipate natural sequences. What is likely to happen next becomes much easier if the learner can visualize where the conversation is taking place. Another factor to consider, the exam taker is required to listen, understand, and maintain the information in memory to answer a variety of questions related to the topic. Arguably, L2 learners are being tested for their ability to listen as opposed to being tested in their second language skills. The score-based interpretation of TOEFL and its accuracy to determine a learner's second-language ability is a debate that has led to many academic research. Lastly, the instrumentation selected may have had a washback effect in seeing gains for Cognitive Academic Language Proficiency (CALP) but positive survey responses perhaps is an indication students noticed significant gains in Basic Interpersonal Communicative Skills (BICS) as AIU students often engage with internationals.

Conclusion

Conceivably different instrumentation could have been used since much of the content involved the understanding of colloquial and idiomatic expressions which may not be useful in preparation for TOEFL. Moreover, with a class size of 43 students, this type of learning environment lacks the discursive cues sometimes necessary to facilitate a large class (Camiciottoli, 2004). Furthermore, positive feedback from participants based on post-survey results demonstrates the need for additional studies to determine if increased intervention time would significantly increase scores between the treatment and control group and to assess how much listening intervention time is necessary to actuate those differences.

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Appendix A

Friends: The One with Ross's Sandwich

Phoebe: _____?

Chandler: _____?

_____?

Phoebe: Ew-eww!! Undies!

Rachel: _____!

_____?

Ross: Well, _____!

Chandler: Well, they're Joey's! They gotta be Joey's!

(Rachel turns and stares at him.)

Joey: Yeah, they're mine.

Chandler: See? They're Joey's! J-J-J-J-Joey's!

Ross: _____?

Joey: _____.

Appendix B

Friends: The One Where Ross Can't Flirt

Ross: Hey!

Chandler: Hey!

Ross: Wow! _____.
_____?

Chandler: _____,
we've got reservations at Ja George.

Ross: Wow! _____?

Chandler: _____
_____.

Delivery Girl: Hi Chandler!

Chandler: Hey Caitlin! _____.

Caitlin: Ugh! _____!
_____.

Appendix C

Survey

Confidentiality: This survey should take less than five minutes of your time. You will not be asked to attach your name to your survey responses. Individual responses will be used for research purposes only and will be strictly confidential. Please ask the surveyor to clarify any questions you don't understand.

Instructions: Check the box that most closely matches the question.

Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Connected Speech increased my ability to listen to the speed of English.					
2. The Listening Fluency class improved my ability to comprehend English.					
3. The Listening Fluency class is an effective way to increase listening comprehension.					
4. The listening fluency class increased my ability to understand spoken English with a native speaker.					
5. The Listening Fluency class increased my ability to understand American humor.					
6. The Listening Fluency class increased my ability to understand American idioms.					

Circle the box that best applies to you.

I began to notice a significant difference in my listening skills during the following week.

Weeks 1-3	Weeks 4-6	Weeks 7-9	Weeks 10-12	Weeks 13-15	No significant improvement
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