Developing Aural Comprehension Skills through Repeated Listening

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Abstract

Listening in a foreign language is difficult. Previous research has identified a number of strategies that can result in increased comprehension. One such is simply listening to a given text more than one time. The present article describes the psychological and linguistic background to this issue, describes a small scale empirical study which provides support for the view that repeated listening increases some important aspects of comprehension and motivation, and suggests a number of techniques for improving listening accuracy that can be done either in class or autonomously.

Processing the speech sounds underlying meaningful linguistic input is a complex and as yet inadequately understood skill (Hulstijn, 2003; Pinker & Jackendoff, 2005), and understanding a spoken second language is particularly challenging, in part due to interference from the first language (Kuhl, 2000). It is often an under-appreciated and underrated one. Students often claim to want to speak fluently, but less often express a desire to understand what they hear (Brown, 2004). Yet listening is arguably a more important component of practical, functional linguistic competence than verbal fluency in that using context to infer meaning depends largely on prior listening skills (Nation, 2001, 261). One can after all selectively frame one's utterances within the limits of one's available lexical and syntactic resources. One does not have a comparable option with regard to input. Listening, like reading, requires decoding of text. But unlike reading, one has little control over input rate. One can read as slowly as one chooses to, but one cannot listen slowly. The source of the text largely determines the rate of input and the processing speed that will be needed.(Hulstijn, 2003; Rubin, Hafer, & Arata, 2000).

Listening is a skill and like other skills, is acquired and maintained by appropriate "time on task" (MacWhinney, 1996). MacWhinney estimates that 50% of learning can be attributed to "time on task". It has been observed that native speakers acquire an enormous vocabulary with little effort specifically devoted to that goal, but simply by exposure and use in real world interactive contexts. That exposure and use is obviously extensive, since it consists of most of the waking day with or around other people (or electronic or typographic instantiations of them). And most of what people do together is talk. Karmiloff-Smith, Plunkett, Johnson, Elman, & Bates, (1998) claim that "The average 3-month old infant has had approximately 900 waking hours or 54,000 minutes of auditory and visual experience...". Thus the stimulus is far from impoverished, as Chomsky has repeatedly claimed without empirical justification and despite evidence to the contrary (Pullum & Scholz, 2002; Scholz & Pullum, 2002). Native speakers do not suffer from lack of relevant input. Foreign language (FL) learners however, often do. This is particularly problematic in view of the fact that adult FL learners do not enjoy the important benefits of an uncommitted neural system and virtually unlimited social support (MacWhinney.

1996). The problem then is how to provide the necessary amounts of the appropriate kinds and levels of input.

Preliminary Considerations

Decoding aural input occurs on several levels---phonemic, lexical, and sentential. The first can be thought of as the process of identifying the meaningful phonetic components of individual morphemes within the sound system of the target language., which would include suprasegmental elements such as pitch and length in languages that use these devices to distinguish morphemes. Lexical knowledge is not presupposed. The second level consists of identifying the potential words formed from these phonemes. This is not a simple matter. A substantial number of students are unable to interpret spoken connected L2 input delivered at normal or even artificially slowed rates of delivery, even when they know all of the lexical components (Bonk, 2000; Hirai, 1999) . Identifying words requires separating them from surrounding phonetic elements. The procedures for doing this are generally known (morphophonemic and morphotactic rules) and some word recognition skill building exercises based on them will be described below. When a potential word has been isolated there remains the problem of matching the word with an appropriate meaning. This can happen in general only if the student has previously learned the word-meaning pairing. (In some cases, the meaning of a word can be gleaned from the context, but this is exceptional). Phonemic identity is not simply a matter of auditory discrimination, but additionally relies on lexical and supplementary cues such as vowel length-cues which may not be available to the foreign student.

Recognizing a word without knowing what the word means is actually a sophisticated feat and is probably beyond what can be expected of beginning FL learners. Pairing a previously learned word with a meaning is not a simple matter either: Experience shows that students will regularly fail to recognize words that they know well and that can be predicted from context by grammatical rules that they can explicitly state (see Wakabayashi, 1997 and Kobayashi 2001, cited in Wakabayashi, 2003). Since all of the elements needed to decode the single-word “text” are in place, the problem is more likely due to insufficient cognitive effort (not using what they know), or insufficient practice, or both (more effort in practice = less effort needed in application), or application of inappropriate comprehension strategies, rather than lack of the requisite linguistic knowledge.

Once the component words have been identified, gross aspects of sentence meaning can be constructed using syntactic knowledge (idioms and phrasal expressions must of course be learned individually, essentially as lexical items).

It should be noted that understanding the many potential layers and types of meaning of an entire text or discourse is a much more complicated matter and requires skills and knowledge that go beyond what a typical FL class can provide. How does a native speaker of American English who has never before heard the expression “boost-a-fazoo” infer the meaning from the spoken sentence “Mr. Burns needs some serious boost-a-fazoo, right dad?” In part, listeners form hypotheses about meaning based on what they think the speaker’s intentions (Bloom, 2000) and communicative tactics (Grice, 1975) are. These hypotheses are not always correct but in any event, the process of attempting to confirm them often requires access to information that many EFL students lack. In this example, the speaker is Bart Simpson, who like everyone else in Springfield, is angry with Mr. Burns for blotting out the sun in order to increase demand for Burns Brand Electricity (“Who Shot Mr. Burns?”). Knowing Bart’s penchant for adolescent slang, and his current animus toward Mr., Burns, one could guess that “boost-a-fazoo” refers to some sort of aggressive retaliative action. While this may be an extreme

example, many other more pedestrian examples could easily be supplied. It is likely that Japanese home-stay students pick up such slang and other vocabulary in roughly this way. This example also illustrates the important point (worth spelling out for students) that it is not always necessary to understand every word in a text, dialog, or snatch of conversation, and sometimes not even possible. Students should feel gratified at understanding anything, rather than frustrated at not understanding everything. Partial understanding is often quite satisfactory. It is certainly the norm, even for native speakers. If meaning is negotiable, as John Gumperz (1982) has shown, then understanding is necessarily contingent on time, place, speaker identity, speaker intentions, etc., which are inherently changeable. All of which is to say that students should have reasonable comprehension goals and expectations, with continuing progress as the key word.

It is generally agreed that vocabulary building is essential to the growth of linguistic competence in either first or second languages (MacWhinney 1995, 1996; Jiang, 2004). It is also widely agreed that second language vocabulary can best be learned by reading (either intensive or extensive, or both), possibly supplemented by explicit instruction (Day & Bamford. 1998, 2002) Many articles and books have been written on the subject of reading. Relatively little has been written on the particular aspect of listening addressed in the present article (Rubin et al., 2000). Jung (2003) has discussed discourse signaling cues in the comprehension of academic lectures, and Vandergrift (1997) has discussed the role of reception strategies in interactive (conversational) listening. Both presuppose relatively higher levels of student proficiency than can be expected of lower level students for whom vocabulary size and frequency of exposure to TL input is their primary limitation. Other researchers have not focused specifically on students at the lowest levels of proficiency or distinguished between different proficiency levels (see Alberding, 2004; Crawford, & Powell, 2001; Cutting, 2004.; Decker, 2004; Kikuchi, 2005;. Nation, 2001, chp. 4; Richards, 2003;. Shimo, 2002). Still others have focused on the strategies and tactics EFL students use to interpret aural texts, generally academic lectures (see Goh, 1998; Vandergrift, 2002, 2003a, 2003b). Yet it makes excellent sense that if vocabulary can be effectively learned from exposure to large quantities of the written target language, it can also be effectively learned from exposure to large quantities of the spoken target language. Certainly, there are important differences, as suggested above, but there are also many similarities. A number of studies have reported increases in comprehension subsequent to repetition of the message, for examples, Pica, Young, & Doughty, 1987, and Chaudron, 1983, both cited in Carrier (1999), and Dupuy (1999), cited in Krashen (2004b). Moreover, motivational benefits have also been reported (Krashen, 2004b, citing Rodrigo and Krashen 1996). In some cases, repetition alone proved to be more effective in increasing comprehension that simplification (Cervantes and Gainer, 1992, cited in Carrier, 1999).

I undertook to test the hypothesis that repeated listening (RL) is beneficial for the development of listening skills among first year Japanese students of English. More specifically I wanted to know (1) whether and if so how much comprehension improves after repeated listening and (2) whether motivation and interest would improve at the same time. I also wanted to know if the students themselves felt repeated listening was useful and more specifically HOW many repetitions they felt would be optimal.

METHOD

Participants

62 Japanese college students (42 males, 20 females, average age = 19. 1) took part over the course of the

spring 2005 term. Participants were first year students enrolled in three sections of an elective English class focusing on listening development using authentic materials. While a larger sample would have merits, for the purpose of this exploratory study, 62 students were deemed adequate. However, it must be noted that because the data were collected during normal class activities, fewer than the total sample of 62 were present on any given day. As these data are for illustrative purposes only, this should not be a major problem.

Materials

I used videos since the visual context would often provide realistic cues as to the identity of the spoken words, as is the case in many types of real world language use. I selected the videos based on the preferences of similar groups of students in past terms at the same school elicited by having them write a brief evaluation after watching the videos. I concluded that segments from *Enter the Dragon*, *Peanuts*, and *The Simpsons* would provide an appropriate range of listening content. Each selection was approximately 15 minutes long and was viewed without pausing.

Procedure

Comprehension was assessed subjectively. Students reported on a scale ranging from "nothing" to "everything", separated by incremental steps of 5%, how much they understood after listening once, and again after listening a second time. Additional questions included "How interesting was this video?" and "How useful was it to watch this video two times？" Students were also asked to write (in English) a short review or comment on the video. Initial analyses indicated that students enjoyed repeated listening, found it useful, and reported better comprehension after a second listening. The effect of RL on subjective comprehension was determined by conducting paired-sample *t* tests contrasting the mean for the First Viewing with the mean for the Second Viewing. Pearson product moment correlation coefficients (*r*s) were calculated to assess the degree of association between interest, perceived usefulness of repeated listening, and subjective comprehension. One additional question was asked: "How many times do you think it would be most useful to watch this video in order to understand it fully?" Options were from "1 time" to "6 or more times". The purpose of this question was partly to provide convergent data in support of the subjective comprehension self-evaluation. It was hypothesized that students who understood more would feel less need for additional viewings and vice versa. The question was also designed to inform decisions as to how many times a given video should actually be shown, and by implication, the optimum length of a video segment per fixed class period. Students filled out the questionnaire and wrote a short comment on the video, after the second viewing of each video. The second viewing took place approximately 5-10 minutes after this first viewing. The three videos were shown on different class days, approximately three weeks apart.

Results

Student self-ratings of comprehension were variable but overall were, as expected, significantly higher after the second viewing. Visual inspection of the data indicated that in no case did comprehension decline between the first and second viewing, as common sense would suggest. Yet it is important to note this, given the small sample size, as group means could reflect, for example, a pattern such that many students report slightly worse comprehension on the second viewing, but a few students report substantially better comprehension. This could

create an impression of overall improved comprehension despite actual declines in comprehension for the majority, washed out by increases for a minority. That this improbable outcome has in fact not occurred is indicated by the high average correlations of .92 ($p < .001$) between self reported comprehension for the first and second viewings. Paired-sample t tests indicated that perceived comprehension of all three videos was significantly better (at $p < .001$) after the second viewing.

Participants reported that the videos were interesting, Mean assessment of the interestingness of the videos were tested against the scale midpoint (4) using single-sample t tests, and found to be significantly higher ($p < .001$) for all three videos

Students reported that repeated listening of the same text was useful. Single-sample t tests against the scale midpoint were again conducted and means for assessed usefulness of a second viewing were found to significantly higher ($p < .05$).

Correlations between interestingness and comprehension were less consistent. Interestingness and comprehension were moderately correlated for *Rainy Day* (r (48) = .51, $p < .001$), modestly correlated for *Enter the Dragon* (r (48) = .32, $p < .05$), and uncorrelated for *Lisa's Substitute* (r (51) = .21, *ns*).

Interestingness was correlated with usefulness for *Rainy Day* (r (48) = .56, $p < .001$.) and *Lisa's Substitute* (r (51) = .39, $p < .01$), but not for *Enter the Dragon* (r (28) = .19, *ns*). This latter finding may have been due to the inadvertent omission of this particular question on one set of questionnaire (hence the smaller sample size for this item).

I calculated a difference score by subtracting the mean for the first viewing from the mean for the second viewing. This difference score was found to be uncorrelated (at $p < .05$) with either interest or usefulness for any of the three videos.

I calculated Pearson product-moment correlation coefficients (r) between comprehension and the students' own estimation of how many times they would need to view the video to understand it fully. A moderate (.50) and significant ($p < .001$) negative correlation was obtained in the case of *The Simpsons*, as predicted, but only small to modest negative correlations, both non-significant, were obtained in the cases of *Rainy Day* and *Enter the Dragon*. *Lisa's Substitute* was third in the viewing sequence and participants may have become more comfortable with the estimation tasks, but this is speculative. Apart from this possibility however, it is unclear what these results imply.

Students appeared to feel, perhaps over-optimistically, that viewing the videos 3-4 times would be sufficient to understand them fully. The median number of times students thought it would be necessary to view the videos in order to understand them fully was 4 for *Rainy Day*, and 3 for *Enter the Dragon* and *Lisa's Substitute* was 4. The mode in each case was 3.

Few differences were found between male and females, the only exception being that the female students reported better comprehension of *Rainy Day* after the second viewing ($p < .05$). As the present data set is insufficiently large to explore this point, I will say no more about it here. In any case, there does not appear to be any gender related response style in operation here.

Discussion

If interest is "the most important condition to encourage learning" (Nation, 2001, 118), then it is worth confirming that the materials used are interesting. William James (N.D.) long ago recommended tapping into students' natural interest and it will be no surprise to any classroom teacher that students pay attention to what

interests them and tend to lose attentional focus otherwise. Paying attention is an effortful activity. Students sometimes lack the energy to make that effort. Building on their interests is one way to capture their attention without demanding undue effort. Given the modest size and scale of the present study it should not be too disappointing that no association was found between interest and comprehension but perhaps what we should be looking at is the association between interest and attention. In view of the short time span, small scale of the study, and the admittedly crude measures used, it is not surprising that no association was found between degree of improvement in comprehension and interestingness or usefulness of the materials. However, the results of relevance are that subjective comprehension improved with a second viewing, and that repeated viewing was regarded as useful, both of which have motivational implications, and that the materials which were selected on the basis of their interestingness, were in fact rated as interesting, which has learning implications in terms of attention focusing. Even if this were only an illusion, it could have a beneficial effect on learning outcomes, in that a sense of making progress is motivational (McWhinney, 1995), while frustration as a result of not making progress can be demotivating (Dornyei, 2001) And while it is difficult to attach a clear meaning to the scale steps participants selected, it is encouraging that in the majority of cases participants felt that their comprehension more than doubled simply by taking the time to watch the video a second time. This implies that their linguistic resources are adequate for extracting a considerable amount of the informational content of the video and that their primary deficiency is simply lack of processing efficiency. Since this is largely a matter of exposure to the material, the appropriate learning strategy will be obvious to the students. Obviously, there is no reason why more concrete comprehension questions could not be included, thereby providing a more objective measure of comprehension, and this in addition could serve a valuable motivational purpose, in the event that students actually understand more than they think they do (as is probably the case for students who claim that they understood absolutely nothing even though the topic and most of the vocabulary is familiar to them). Finally, interestingness and comprehension were associated for two of the three videos. While it may be injudicious to infer too much from two significant correlations (Cohen, 1990), it does not seem unreasonable to suppose that the link between interestingness of the material and comprehension of the material lies in the fact that attention tends to be focused on materials that are interesting—a rather unstartling conclusion, to be sure. Yet the fact that no association was found between interest and improvement in comprehension may suggest that there is more to the story. Clearly, a larger scale, longer term study with more precise measures, would be advantageous for clarifying these issues.

Recommendations

Repeated Listening can be done alone autonomously or in classes of virtually unlimited size. In both cases, students will benefit from feedback (MacWhinney, 1995). The feedback can be provided by the instructor, but in many cases, the student can obtain the relevant feedback from the materials simply listening one or more additional times. In other cases, the feedback can by provided in the form of supplementary printed text. The first preliminary is to distinguish between familiar and unfamiliar vocabulary. In the first case, the task is to accurately decode a phonetic form (for example, to distinguish between *walk* and *work*), and then conduct a memory search for the semantic form (it whatever way it happens to be encoded—for example, in the First Language (L1) equivalent, or as a visual image, or a set of features, etc.). In some cases, the phonetic form may be associated with more than a single semantic form. In such cases, grammatical information derived from

context may be necessary to disambiguate meanings. To continue the example, both *walk* and *work* may be used as either nouns or verbs and hence be associated with distinct entries in the Japanese mental lexicon, assuming that they are stored in this fashion for a particular individual. One simple method for phonemic awareness resembles the sort of ear training that musicians will be familiar with--gradual practice in discriminating pairs of pitches, followed by prompt feedback. The first step is to decide whether the pitches are the same or different. After that, whether the first is higher, or lower, than the second. After that, identification of the inter-valic distance between two pitches is the target. And so on. Recognition and discrimination of problematic sounds in the target language (for example, /l/ and /r/ in English for Japanese students, can be taught in the same manner. The procedure can be reversed to teach productive skills. A simple note card system can be used for both. A word is written with one element of the minimal pair (although it need not be a pair) on one side of each of two cards. Another word with the contrasting element of the minimal pair is written on the other side of the card. The student has one set of cards, the teacher has the other set. To develop (or to test) listening skills at this level, the teacher reads one of the words. The student indicates by pointing to the card that has the word that the teacher read (variations on this method can be readily improvised). Productive skills can also be developed (or tested) simply by reversing the procedure. The student will read one of the cards and the teacher will indicate which of the two he or she heard. In some cases, the teacher will not be able to distinguish. That can be indicated. In other cases, the target sound, while not native speaker perfect, may clearly be closer to one than to the other. This relative approximation to the target sound can also be indicated, perhaps by using an odd numbered scale, such as below:

Figure 1. Sample assessment frame.

Road __ __ __ __ __ Load

The teacher could circle the appropriate box, or place a mark on the scale step, such that closer proximity to the target word indicates more accurate pronunciation. (One merit of this method is that virtually any competent speaker of the target language could serve as the “teacher”).

As long as minimal pairs are used, the target phonemes can be placed at any point within the sequence, as in the following example.

Figure 2. Sample assessment frame.

Sat __ __ __ __ __ Sad

In the second case, the task is to identify a phonemic sequence that may constitute a possible word in the TL. Students will need to rely on their knowledge of English phonology, morphology, syntax, and orthography. Next they will need to apply the same skills that a native speaker would use to interpret a new or unknown word or expression, whether written or spoken. Beginning EFL students will generally lack many of these skills, and therefore will need to make use of a dictionary (or native speaker).

Obviously, speech sounds seldom need to be discriminated outside of meaningful, connected, and

contextually situated utterances. This can be demonstrated by presenting written sentences such as “Snoopy was (sad, sat) because the chair broke when he (sad, sat) on it”. Students would be instructed to select the appropriate word from the pairs within the parentheses as the teacher reads the sentence. Regardless of the actual pronunciation (perception of which is in fact cued by voice onset time), grammatically prepared students are very likely to select the “correct” word. This presumably would have a positive motivating effect by reassuring students that comprehensibility and communicative success does not depend entirely on “perfect” native speaker -like pronunciation.

Conclusion

Listening in a foreign language, no less than the other language skills, requires “disciplined investment of mental activity” (Wolvin & Coakley, 1988, cited in Rubin et al. (2000). The better a skill is learned, the less effort and attention capacity is required to execute it, leaving more available for other processing demands (Hulstijn, 2003). However, automatizing the skill to that level in the first place requires effort and a certain degree of sacrifice to pay the opportunity costs to show up for class or forego more immediately appealing activities (Brown, 2005), to stay awake and alert in class if they are able to show up (Brown, 2004), or to participate in class activities once in class (Burden, 2002). Students cannot learn well without paying attention (albeit a certain amount of accidental, incidental learning may occur). Learning is promoted by “noticing” and “awareness” (Schmidt, 2001, cited in Robinson, 2005), which in turn requires attention paying. As many teachers will be able to attest, it requires more effort than some students can muster to pay attention to subjectively uninteresting materials. Students may begin their learning of English with or without high initial motivation, but arguably more important is their day to day willingness to make the needed efforts. One demonstrably effective method, discussed in the present article, is to select materials of known interest to the students, (which can be videos, books, magazines, advertisements, or simply stories told by the teacher), and to provide multiple exposures to it. The optimal number of exposures can be determined by asking the students themselves, as demonstrated in this article. The fact that the material is interesting means that students will not be obliged to make efforts that may be beyond them, and the fact that they believe the practice is useful suggests that they will participate. The material can of course easily be supplemented by transcripts and vocabulary notes (see http://.www.geocities.com/eigoa/scripts for examples). When used together, materials that are in fact interesting to the students, and a method that they themselves believe is effective, are likely to maximize attention paying under adverse conditions, hence are likely to promote learning for the vast majority of EFL students in most parts of the world outside of North America and other native English speaking countries.

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