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Vocabulary is undoubtedly an (if not *the*) essential component of language acquisition. Imagine that you have studied Japanese for years at university and are quite fluent in day-to-day oral communication. One day on a visit to the countryside, an older woman turns to you and says, "*Souyankei?*" You comprehend the grammar (*sou + something + something),* yet the words make no sense. However, if you were to remain in the countryside and eventually learn a little bit of the local dialect, perhaps enough to say *hello, thank you,* and *please,* you will find yourself armed with enough knowledge to hold simple conversations and buy groceries. A wonderful example of this can be found in Schmidt's (1983) study of "Wes" which documents the language use of a Japanese man living in Hawaii. Wes has very poor grammar, though he does know some phrases and several words. However he is quite functional in his environment and relies heavily on scaffolding, social competence, and vocabulary for all his communicative needs. Thus, while grammar is indeed important and necessary, vocabulary is the strong rock upon which communication is founded.

Thus, if vocabulary is the foundation of successful communication, then obviously the more words a language learner acquires the more competent they should be. Nature, apparently, is aware of this fact as noted by Cody and Huckin (1997) who found that children between the ages of 2 and 7 can learn up to 15 words a day in their first language. That means children may be learning up to 5,475 new words each *year*, a feat that second language learners are unable to duplicate, despite their desire to do so. Hatzenberg and Hulstijn (1996) report that a language learner must know at least 2,000 words simply to participate in everyday oral communication and must know upwards of 10,000 words to read academic texts. Slightly less demanding is Hirsh and Nation's (1992) estimate that 5,000 words are necessary to read academic texts at a 95% comprehension level, though Nation (2001) is quick to point out that the remaining 5% may easily amount to an additional 1000+ new words. Thus, it appears that while vocabulary is essential, there are an overwhelmingly large number of words for a second language learner to acquire. Nation (2001) therefore concludes that direct vocabulary instruction (through flashcards, word lists, etc.) is simply not enough. He suggests that language learners need more incidental means for mass vocabulary acquisition, such as extensive reading.

In extensive reading, learners are encouraged to read as many books as possible at or near their own ability level. Extensive reading provides three key benefits for learners: comprehensible

input, repetition, and motivation. Learners are also typically allowed to choose their own books, which provides them with an additional benefit of autonomy in choosing books which they personally find interesting. This autonomy leads to an increase in one's motivation to read (Dörynei, 2001). Likewise by choosing a medium such as books that, by their very nature, are divided into chapters and sub-sections, it may also be easier for learners to set more successful short-term goals (such as completing the current chapter) and thus more successfully reach their long-term goals (such as completing the current book). These, too improve one's intrinsic motivation (Locke & Latham, 1994). Additionally, by choosing texts slightly above a student's current level of ability, they can encounter texts that are still comprehensible (Krashen, 1981). Krashen deems such "comprehensible input" necessary for language acquisition. Nation (2001) similarly believes that a 98-99% level of comprehension is necessary for the incidental acquisition of vocabulary.

Not only is comprehensible input a necessary feature of extensive reading materials, but there is a need for quantity. Large quantities of comprehensible input lead to an increase in syntactic and lexical repetition. Coady and Huckin (1997) in their Incidental Learning Hypothesis state that there is only a 5-10% chance of acquiring a new word after only a single encounter. Nagy and Herman (1985) state, in their Vocabulary Learning Hypothesis, that vocabulary is learned gradually through repeated exposure to new and unknown words in various contexts. Repetition not only meets these needs, but it also increases language acquisition through increased comprehensible input (Krashen, 1981), increased exposure to word generation (variations in word usage within different contexts) (Meara, 1995), increased background knowledge and enhanced schema which aid in further readings (Coady & Huckin, 1997; Cho & Krashen, 1994), increased depth of knowledge of grammatical behaviors, collocations, register constraints, and alternative meanings (Schmitt & Carter, 2000), as well as decreased overall learning burden (Nation, 2001).

However, despite all the apparent benefits of extensive reading, it becomes obvious that where it gains in quantity (i.e., number of words acquired) it lacks in efficiency (Nation, 1997; Waring, 2001). If learners rely on extensive reading as their sole means of vocabulary acquisition, it will likely take a very long time to amass 10-12 encounters for each of the estimated 2,000 words necessary for daily oral communication (Hatzenberg & Hulstijn, 1996). The major strength of extensive reading becomes its own major weakness. However, there is yet another method which retains the benefits of extensive reading, but increases the rate of repetition, thereby increasing learners' rate of vocabulary acquisition – Narrow Reading.

Proposed by Krashen in 1996, narrow reading, like extensive reading, is based on receiving large quantities of interesting, comprehensible, and repetitive input. The main difference, however, is the length of the texts and their level of difficulty. For example, where an extensive reading program

may have students reading several novels at around a 98% comprehension rate, a narrow reading program may have learners reading many newspaper articles beginning with a lower comprehension rate (80-90%, for example). The logic behind narrow reading is that while it still affords learner autonomy and promotes learner interest, the shorter and more difficult texts include a much higher rate of repetition and therefore learners are more quickly able to comprehend and acquire the new lexicon, which in turn increases their level of comprehension, which in turn increases their chances of increased vocabulary acquisition and background knowledge, ad infinitum (Schmitt & Carter, 2000). Furthermore, Shaffer (2004) indicates that by carefully choosing reading materials for increased similarity, word repetition can be increased, as can word generation, though to a somewhat lesser degree.

This current paper focuses on a new possibility for incidental vocabulary acquisition, narrow video. Along the lines of extensive reading and narrow reading, I propose that narrow video would be based on large quantities of short audio-visual texts, such as are typically found in daily news broadcasts. (Note, however, that this current paper does not consider the use of closed-captioning as part of the visual input.) Learners may, for example, watch the daily news once a day for a week, or perhaps watch the same TV drama once a week. Not only would this new approach provide the authentic and meaningful input necessary for increased depth of knowledge (Cho & Krashen, 1994; Nation, 2001) and increased motivation (Dörnyei, 2001; Locke & Latham, 1997), it maintains a similarity in presentation, lexicon, and register across individual stories which allows learners to utilize their native language schema for "news" (Coady & Huckin, 1997) as well as refer to their background knowledge of the world, society, and politics (Cho & Krashen, 1994) to further increase their comprehension. Beyond the increased levels of repetition found in TV news, due to highly similar subject matters (Shaffer, 2004), "newscaster speech", and the frequency of "follow up" reports seen on a day-to-day basis, just as in narrow reading, learners receive the necessary amount of exposure to and variation in lexicon for incidental language acquisition. An additional advantage of using narrow video as opposed to extensive or narrow reading lies in the benefits of video itself. Visual input not only aids in comprehension (e.g., live, on the scene footage often appears while the newscaster presents the details) but encoding new information, such as vocabulary, with both verbal and visual aspects greatly improves recall (Paivio & Csapo, 1973). Paivio (1986) and Clark and Paivio (1991) theorize that the process of duel-encoding information in this manner leads to two unique storage locations within the brain, one in a "visual" portion of the brain and the other in the "verbal" area. The implications of which are an increase in the learner's ability to comprehend and store new lexical information, but also an increased ability for successful recall.

Based on the potential benefits of narrow video, the current paper aims to assess the suitability

of audio-visual input for incidental vocabulary acquisition by answering the following research questions: (1) How difficult, lexically, is the source material? and (2) How suitable is this material for incidental vocabulary acquisition as determined by the degree of repetition and generation in the texts?

METHOD

The audio content from five "KDKA's TV News at Noon" programs were recorded from their internet-based retrieval system (http://www.kdka.com) and were then transcribed by hand. (Television news was selected due to its ready availability to learners and for its high level of repetitiveness). Three shows were chosen from a sequential Wednesday-Thursday-Friday period of time in February 2005 with the remaining two shows chosen from the following Monday-Tuesday period of time. This gap created by not including the Saturday and Sunday broadcasts was introduced as a simple means to check on the effect of day-to-day story repetition.

Once transcribed as plain text files, the five news programs were then analyzed using the Range software program (Heatley & Nation, 1996). Range reads in one or more plain text files then returns frequency of repetition counts for the word tokens (running words), word types (the first occurrence of a word), and word families (clusters of words based upon a common root), as they are distributed across vocabulary levels such as High Frequency (the first 2000 frequently occurring word of English (West, 1953)), Academic Words (based on Coxhead's (2000) Academic Words List), and Low Frequency (all other words.) The frequency and vocabulary level-based words lists returned from the Range program were then further analyzed by hand to produce three further words lists containing (1) frequency counts for only function words (a closed class of mostly meaningless, yet essential words used syntactically, e.g., in, of, but, then), (2) proper nouns (names of people and places), and (3) context words (words that define the subject matter, e.g., for a news story on a fire, several common context words might be *blaze, fire, firemen, building, cause,* and *burnt*). These further words lists were used to examine the lexical complexity of the source materials.

RESULTS

Answering each research question in turn, we begin with the first question: *How difficult, lexically, is the source material?*

It is possible to assess the overall difficulty of a text by looking at the distribution of lexicon among the three base word levels (High Frequency, Academic, and Low Frequency). Nation (2001) states that for academic texts 80% of all word tokens (every word written or spoken) fall under High Frequency vocabulary, with an additional 10% coming under Academic, and the remaining 10%

belonging to Low Frequency vocabulary. The results for all five news broadcasts analyzed together (in order to reduce any chance for anomalies such as "special reports" or "weekly features") show a marked increase in High Frequency vocabulary and a consequential marked decrease in academic vocabulary as compared to Nation's (2001) reported averages (See Table 1 below). This suggests that the lexical input received from KDKA TV News is easier to comprehend than a typical academic text. Closer inspection via the Range program shows that 79.8% of all word tokens actually fall within the most frequently occurring 1000 words of English, indicating, further, the comprehensibility of news broadcasts. The slight increase of Low Frequency vocabulary, as compared to the estimated 10% coverage, suggests some increase in difficulty, though a brief look through the list of Low Frequency vocabulary shows the majority (5.6% of Low Frequency's 11.4% coverage) to be proper nouns such as *Thompson, CBS, pontiff, Rebecca, Allen,* and, *Washington.*

Table 1. *Distribution of word tokens per vocabulary level*

	High Frequency	*AWL*	*Low Frequency*
5 Broadcasts	86.3%	2.3%	11.4%

For all five broadcasts, proper nouns were found to represent 5.60% of all of the spoken input (see Table 2 below). This is greater than the overall 4.0% coverage found for academic oral discourse (Shaffer, unpublished manuscript). Function words provided 37.0% coverage, though this is not surprising due to their very "glue-like" nature in forming proper syntax (Schmitt & Carter, 2000). Perhaps, though, the most interesting result is in the large number of context words, 45.7%. This rather large number indicates that almost every other word is related directly to the subject matter. For example, when discussing the weather, commonly encountered context words included *sunny, snow, fair, Accuweather,* and *Rebecca.* Context words typically include a variety of word types such as proper nouns (*Accuweather* and *Rebecca*) as well as regular nouns (*snow*) and adjectives (*sunny* and *fair*).

Table 2. *Distribution of work tokens per vocabulary class*

	Function Words	*Proper Nouns*	*Context Words*
5 Broadcasts	37.0%	5.60%	45.7%

Overall, analysis results indicate that despite an increased number of proper nouns, the large coverage provided by the first 1000 high frequency words and subsequent decrease in academic vocabulary greatly increase the potential for incidental vocabulary acquisition.

Continuing with the second research question, *How suitable is this material for incidental vocabulary acquisition as determined by the degree of repetition and generation in the text,* analysis reveals a noticeable increase in repetition among all three vocabulary levels (High Frequency, Academic, and Low Frequency) while repetition among context words decreases steadily (see Table 3 below). Repetition, as indicated in Table 3, is represented by a type-token ratio. As noted above, a word type is counted as the presence of a particular word in a text. No matter how often the same word appears throughout the text, it is only counted once. A word token, however, is counted as every single occurrence of that particular word. Therefore if it occurs 20 times in the first two minutes, then it is counted as 20 word tokens. Therefore a type-token ratio tells us how often (work tokens) each word (work type) repeats. So, if a word occurs only once, then our type-token ratio becomes (1 type / 1 token =) 1.00. If a word occurs twice, (1 / 2 =) 0.50. Thus, as repetition increases, the type-token ratio decreases, as clearly seen in the results for High Frequency, Academic, and Low Frequency vocabulary in Table 3.

Table 3. *Type-token ratios for vocabulary levels & context words repeating 10+ times*

	High Frequency	*AWL*	*Low Frequency*	*Context Words*
1 Broadcast	0.293	0.722	0.456	0.041
2 Broadcasts	0.159	0.624	0.450	0.057
3 Broadcasts	0.133	0.596	0.437	0.068
4 Broadcasts	0.117	0.550	0.437	0.078
5 Broadcasts	0.106	0.521	0.428	0.083

The most dramatic changes in repetition, as indicated by Table 3, is in High Frequency vocabulary and Context Words. For only a single broadcast, High Frequency vocabulary repeats, on average, 3.4 times per word (1 type / 0.293 tokens) which almost doubles for two broadcasts with 6.3 repetitions per word (1 type / 0.159 tokens) on average and nearly triples with five broadcasts at 9.1 repetitions. This would clearly indicate that, based on 10-12 exposures necessary for acquisition claimed by Coady and Huckin (1977), language learners watching a full week of TV news should be

able to acquire a great number of high frequency words. Likewise, for one broadcast context words occurring greater than 10 times were found to repeat an average of 24 times, though by the inclusion of the fifth broadcast, this number has decreased to 12 repetitions. Some of the highly repetitive context words with the entire week of broadcasts include *news* (67 repetitions), *KDKA* (53 repetitions), *police* (52 repetitions), *Pittsburgh* (49 repetitions), *fire* (42 repetitions), and *pope* (33 repetitions).

Similarly to repetition, word generation can also be presented by a ratio, a family-type ratio. A family-type ratio indicated the number of unique words (types) occurring, on average, per word family. So, for example, if we have only one word type representing only one word family (such as in the function word *in*) we have a family-type ratio of (1 / 1 =) 1.0. If we have 3 word types representing one word family (such as the words *eat, ate, eaten* for the family *eat*) we have a family-type ratio of (1 / 3 =) 0.33. And thus it can also be seen that as generation (an increase in work types representing a single word family) increases the family-type ratio decreases.

Table 4 (below) clearly shows a steady increase in generation over an increasing range of input. With only a single broadcast, the family-type ratio of 0.612 indicates that 1.6 word types, on average (1 / 0.612), represent one word family, which is not as much as we might hope, though. However, with the inclusion of all 5 broadcasts word generation has improved to a family-type ratio of 0.242, or 2.4 word types representing each word family, on average.

Table 4. *Word families, word types, and family-type ratios for increasing numbers of broadcasts*

	Families	Types	*Family-type Ratio*
1 Broadcast	626	1023	0.612
2 Broadcasts	886	1653	0.536
3 Broadcasts	1046	2117	0.494
4 Broadcasts	1179	2592	0.455
5 Broadcasts	1294	3055	0.424

CONCLUSIONS

The results of this study suggests that narrow video can, in fact, be a viable resource for incidental vocabulary acquisition. The increased quantity of easier lexicon such as high frequency vocabulary combined with the high levels of repetition of in both high frequency and context words

are precisely the type of input necessary under Coady and Huckin's (1997) Incidental Learning Hypothesis and Nagy and Herman's (1985) Vocabulary Learning Hypothesis. However, the quantities of word generation appear to be too low to provide much aid increasing depth of knowledge (Nation, 2001), though the family-type ratios noticed in the current study resemble those found for Newspaper articles (Shaffer, 2004), with both studies indicating mean family-type ratios of 0.5.

It is possible that the low rates of generation seen in this current study and in the previous newspaper study (Shaffer, 2004) can be attributed to the TV-news medium. In order to test this theory future research might wish to look at other television formats such as national news, weekly dramas, or late-night comedy shows. Future research may also wish to look into longer works such as full-length feature movies or even a set of related movies such as the *Indiana Jones* series.

One more area of future research that is highly recommended would be a case study to test the reliability of the above data and conclusions. While rooted in facts and figures, the results of lexical analysis are best supported by performance data and real-world results. It is in this direction I hope to expand upon the current research in the near future.

CLASSROOM APPLICATIONS

There is obviously a great deal of interest of late in the use of audio-visual media in the modern classroom. And while it still bears further theoretical and experimental research, those wishing to try implementing Narrow Video into their own teaching curriculum might want to look towards short serial works or repeating segments of longer shows (e.g., the "Top Ten" lists from "Late Night with David Letterman", etc.). It is also quite possible that shorter shows, such as those made for children (which are all naturally short in length) might be more accessible and have a greater audio-visual connection (seeing as there are few visual clues to match the lexical contents of a "Top Ten" list).

Implementing such videos into the classroom might very well take the form as a warm-up activity or as the focus of a group discussion. Though, with the limited amount of time educators have with our students, it might be more efficient to have students to select their own videos of interests (so long as they are of the same show or on the same narrow topic matter) and watch as many of them as possible outside of class. To assure that such students are doing the actual "viewing" assignment, they could then present a type of informal report to the teacher or among a small-group of peers as a discussion activity.

Again, these are merely a few suggestions. Their success would depend on a large number of variables that cannot be accounted for in this current paper. However, they would make for a very useful, if not interesting, longitudinal study on the use of Narrow Video for educational purposes.

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