Extended discourse in first and second language acquisition: A challenge and an opportunity∗

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First language learners acquire vocabulary in the context of participation in discourse, and the quantity and richness of that discourse is the best predictor of their progress. Similarly, we argue, engagement in discourse, in particular debate and discussion, is an effective component of classroom instruction for second and foreign language learners. Evidence supporting the effectiveness of a particular discussion-based program, Word Generation, is presented, in particular its effectiveness with current and former second language learners of English. Principles implemented in Word Generation that could be applied in any educational setting are identified.

Areas of interest: first language acquisition, second and foreign language acquisition, classroom discourse

1. Introduction

The acquisition of vocabulary is a persistent concern for educators, both those dealing with second language learners and those worried about the literacy development of first language speakers whose background has not provided rich language or literacy experiences. There is a wealth of research on the features of effective vocabulary instruction (Elleman, Lindo, Morphy, & Compton, 2009); much of that work, though, treats teaching vocabulary as a disjointed task,

starting with lists of words to learn and with procedures to help remembering word meanings. In this article, I will describe quite a different approach to vocabulary instruction – a model for instruction in words and word meanings embedded in extended discourse, the contexts in which it is normal to learn words.

The rationale for this approach to teaching vocabulary to second language learners derives from studies of first language acquisition. We know that young children first learn words to express interpersonal intents – starting with forms like *bye-bye, dat, uh-oh,* and *more,* all used as turns in conversations structured by adults, and all used to accomplish communicative intentions (Ninio & Snow, 1996). Only many months after the first words are uttered do young children start using words referentially or descriptively; words are ways of participating in interactions for young children long before they are ways of exchanging information. An implication of this is that young children need not have a well-developed sense of the meaning of the word, as long as it works to accomplish their purpose.

Of course, the speed and ease of vocabulary acquisition for young first language learners can be highly variable (Hart & Risley, 1995). It is now well established that quantity of input (i.e., number of words heard) is a strong predictor of children's vocabulary growth (e.g., Hart & Risley, 1995; Huttenlocher et al., 1991), but also that amount of input is associated with quality of input. Parents who talk more also gesture more (Rowe & Goldin-Meadow, 2009), talk about a wider array of topics using a wider array of different words (Beals & Snow, 1994), and extend topics of conversation over longer turns by engaging in pretend play, producing narratives, and giving explanations (Snow, Tabors, & Dickinson, 2001). In short, rich discourse is the context for rapid and successful vocabulary acquisition for first language learners.

It seems likely that similar processes would be at work for older learners, those acquiring complex vocabulary in a first language or brand-new vocabulary in a second language. The purpose of the research described here is to describe results from a program that used extended, participatory discourse as a context for vocabulary acquisition.

2. Word Generation: Learning vocabulary through discourse
2.1. Design of the Word Generation program
Word Generation was originally developed for use in the Boston Public Schools, with 12-14 year old students, under the auspices of the Strategic Education Research Partnership (Donovan, Snow, & Daro, 2013). Many of the students in the schools in Boston come from low-income and non-English speaking families. Thus, they often struggle with reading comprehension in the later elementary grades, when the texts they read are full of low-frequency academic words and complex syntactic structures – the complex of skills often referred to as 'academic language' (Snow & Uccelli, 2008). Word Generation was a low-

intensity effort to give students a chance to experience and use the words they would need to be successful in their school-assigned texts.

The basic design principles of Word Generation were the following:

- Start with debatable topics, such as civic, moral, or economic dilemmas
- Make sure those topics are of interest to students in the target age range
- Write brief, accessible articles about the topics that provide a balanced picture of the dilemma
- Embed target academic words in the articles
- Provide activities in the course of which additional information about the topics and additional uses of the target words are modeled
- Design an oral debate/discussion enabling the students to formulate and defend different perspectives on the topic
- Assign a brief 'taking a stand' paragraph, in which the students have the opportunity to argue for their own perspective and use the target words.

Each of the dilemmas was meant to be dealt with for 15-20 min a day for five days. Fuller information about the program and freely available curricular materials are available at www.wordgen.serpmedia.org.

The Word Generation program was designed taking into account well-established principles of vocabulary instruction for both first and second language learners (see, for example, Graves, 2005; Graves, August, & Mancilla-Martinez, 2013): present the target words initially in a semantically rich contexts; give student-friendly definitions only after initial exposure; ensure recurrent exposure to the target words, ideally in varied contexts; provide information about morphological and etymological structure; provide multiple opportunities for students to use the words themselves orally and in writing.

2.2. Role of discussion in Word Generation
The Word Generation activities promote active student discussion in a variety of ways – by prepping teachers with open-ended questions about the readings, by defining many reading and problem-solving activities as ones to be completed in pairs or small groups, and most powerfully by prescribing a weekly classroom debate activity. These discussion activities can be seen simply as opportunities for the students to use and hear the target vocabulary words. We would argue, though, that the value of the discussion transcends that of offering repetition of the words.

There is now strong evidence that opportunities to participate in classroom discussion are associated with more rapid and deeper learning, reflected in student advances in critical thinking and in reading comprehension (Lawrence & Snow, 2010; see also Murphy, Wilkinson, Soter, Hennessey, & Alexander, 2009 for a meta analysis of discussion-based teaching methods).

Discussion creates, we argue, authentic contexts for using the newly taught vocabulary, and strong motivation to use it in order to be an effective debater. Thus, procedures to promote student participation in classroom talk are central to the design of Word Generation, and replicate as much as possible the kinds of rich conversations in which attentive and well-educated parents involve their young first language learners.

3. Evidence supporting the value of Word Generation
3.1. Quasi-experimental evidence from Boston

Our first work on the Word Generation program was carried out in collaboration with teachers and students from two Boston Public Schools (BPS), where the topics, the materials, and the approach were piloted. BPS leaders had asked for help in supporting the literacy development of students in 6th through 8th grades, so we focused on their needs in designing the program. Subsequently, we implemented the program in six volunteer schools, and found significant improvement on knowledge of the academic words taught, in comparison to other schools that only did pre- and post-testing (Snow, Lawrence, & White, 2009). A subgroup analysis showed, furthermore, that the gains were greater for language minority students – those for whom English was not spoken in the home. Students still classified as limited in English proficiency did not benefit, however, suggesting that the materials would need adaptation for use with those at earlier stages of English learning (see section 3.2).

We were able to test students in those same six schools the following school year, and incorporated a subset of the year-one target words into the year-two test. We found that both English-only and language minority students maintained knowledge of the words taught over a second school year, showing in fact better performance at the end of year two (Lawrence, Capotosto, Branum-Martin, White, & Snow, 2012). We think this reflects the influence of the language encountered in the classroom and while reading: the words we had selected for instruction were likely to be encountered regularly in the course of middle grade studies. Having been taught something about their meaning evidently sensitized the students to them so that subsequent exposures could be used to construct understanding.

Furthermore, an analysis of the discourse within the Word Generation and control classrooms confirmed that quality of discussion mediated an important portion of the impact of the program. In other words, the program was more effective in classrooms where the discussion quality was high, and less effective if the discussion component was not implemented or was implemented with low quality (Lawrence, Crosson, Paré-Blagoev & Snow, in press).

3.2. Experimental and quasi-experimental evidence from Texas

Recognizing that the Word Generation had been less than optimally successful with students still classified as English Language Learners (ELLs), we

partnered with the Center for Research on the Educational Achievement and Teaching of English Language Learners (CREATE) to develop and test a version of Word Generation for ELLs. CREATE was undertaking a set of co-ordinated studies to evaluate approaches to improving ELL students' reading comprehension. It is widely acknowledged that vocabulary knowledge is a prime predictor of reading comprehension (Snow & Kim, 2006), so the Word Generation team designed a somewhat adapted version of the Word Generation materials as part of the CREATE suite of interventions. An experimental study was carried out in Texas, where a majority of students are ELLs or very recently reclassified out of ELL status. A ten-week version of the program was implemented in English language arts classes, by teachers who had been randomly selected to participate in the Word Generation professional development and to receive the curricular materials for use with their students. This version of the program incorporated more opportunities for students to practice writing the words, and some specific teaching about word roots, morphological structures, and Spanish-English cognates. Importantly, despite these more traditional instructional components, it preserved multiple opportunities for small-group work, and the weekly whole class debate. Results from this experimental study showed significantly greater word learning for the students receiving Word Generation than for those in the control group; in the subsequent year, the teachers who had originally been randomly assigned to the control condition were given Word Generation professional development and materials. Their students showed significantly greater learning of the target words than those same teachers' students had shown in the previous year, when they were not using Word Generation.

3.3. Heterogeneity of effects in San Francisco

A multi-site experimental study of the full, 24-week Word Generation program was carried out, with schools randomly assigned to experimental or control condition in each of three cities. San Francisco was one of those cities – one with a very high proportion of current and former English language learners among its students. An analysis of the impact of Word Generation on student learning in San Francisco showed the same pattern as the original, quasi-experimental study; students receiving the program learned more words, on average, than students not in the program, and students from language minority households learned more than students who were monolingual English speakers. Because of the large number of ELLs in the San Francisco sample, it was even possible to disaggregate the groups by looking at years since reclassification as fully English proficient (Hwang, Lawrence, Mo, & Snow, 2014). Students who had been classified as ELL continued to outperform English-only classmates in their learning of words from the Word Generation program for four years – with the difference between bilingual and monolingual students diminishing every year. Evidently most students who have been reclassified as fully English

proficient continue to show weaknesses in vocabulary, which are in turn associated with an enhanced uptake of the word learning opportunities provided through Word Generation.

These findings echo those from another study showing the largest positive effects of the program on students who start out scoring low on vocabulary, particularly those in generally low-scoring schools (Lawrence, Rolland, Branum-Martin & Snow, 2014). In other words, both first- and second-language speakers of English whose vocabulary skills are limited benefit differentially from opportunities to discuss interesting topics using relevant and well-selected vocabulary words.

4. Implications of these findings for second/foreign language teaching

The key takeaway message from these studies of Word Generation, and from the larger body of work on the value of classroom discussion reviewed briefly above, is that students learn more from talking than from listening! The mechanism explaining the value of classroom discussion in supporting learning is not entirely clear, though we are currently engaged in a large-scale evaluation of Word Generation designed to test the impact of discussion on hypothesized mediators of its effects. In observing the many classrooms implementing Word Generation, we could clearly see a high level of engagement among students – real eagerness to formulate and defend their own positions on the dilemma of the week. Perhaps it is simply engagement and motivation that account for the positive effects. It must be acknowledged that not all the discussions we observed were exemplary: sometimes students got off topic; sometimes the floor was dominated by only a few students; relevant contributions from quiet or shy students were sometimes ignored, rather than being the basis for higher-level thinking. Implementing discussions in classrooms like those participating in our research is difficult, and neither teachers nor students were well-prepared for this style of learning. Pressures to cover the assigned curricular topics often limited the time available for the discussion. And sometimes discussions of delicate or personally relevant topics descended into unproductive and possibly hurtful exchanges. Nonetheless, the students reported greatly enjoying the debate activity, and many teachers told us they had never fully appreciated the depth and subtlety of their students' thinking before launching the classroom debates. Students in urban schools in the U.S. often have limited literacy skills, so the quality of their writing greatly underestimated the quality of their thinking.

As noted above, using Word Generation or similar programs with students still in the relatively early stages of English language learning requires careful adaptation. We have produced support materials for teachers who wish to use the program with ELLs (www.aala.serpmedia.org); a standard adaptation many teachers report making is simply to lengthen the time devoted to the program – rather than covering the activities in 20 min per day, extending them to 45 min, or using a one-week unit over 10 days. Teachers of ELLs have told us they chose

to use the program precisely because of civic value of the discussion focus; for example, a teacher working with Vietnamese learners of English reported that the students were not allowed to argue with their parents at home, and needed to learn to discuss if they were to become proper American citizens.

The larger lesson from this research, though, has to do with the value of discussion-based approaches to teaching in all language-learning situations. We know that oral language skills are the best preparation for literacy achievement, in both first and second language learners (Dixon, Zhao, Shin, Wu, Su, Burgess-Brigham, Gezer, & Snow, 2012). Whether our primary purpose is promoting foreign language proficiency or teaching second language skills as a basis for further educational attainment, incorporating classroom discussion of challenging but engaging topics is a highly promising approach.

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