

**Flocabulary Research Base:**  
Effective Vocabulary Instruction for the 21<sup>st</sup> Century

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Good readers are good students. Good readers often excel at writing tasks, analytical thinking, and test-taking. It is no surprise then that the need to improve the reading level for students in America is crucial to improving overall education. This paper will outline some of the issues that struggling readers face – especially those of so-called ‘non-mainstream’ populations, i.e. ethnic minority students or those living in poverty – but the practices apply to all students. It is clear that the tools we use to help students succeed at reading and writing must be interesting to the students and pedagogically sound. Just as important as teaching a student a new word, is making the student feel comfortable enough in the classroom, so that the new word can be effectively learned and appropriated.

There are countless ways to help students feel like they genuinely belong in school. This feeling of inclusion, in turn, can help them feel like they can benefit from education on a personal level and use it to interpret their environments on a daily basis. That said, it is still difficult to engage students in a world where high media expectations exist. This is one of the reasons that the use of hip-hop music combined with interactive, game-inspired software is one that appears promising for language arts instruction, particularly in the urban school setting.

Academic researchers have begun focusing on student engagement as a major factor in academic retention. To begin with, the importance of a student feeling that he or she *belongs* in school can hardly be overstated. Young people are required to spend a large part of their time within the walls of these institutions and are expected to participate actively during that time. Unfortunately, many children of the population Fritzberg describes as “non-mainstream” – ethnic minorities and those of low socioeconomic status – “note that the subjects they study, and the ways in which they study these subjects, are often culturally foreign to them,” or that it seems “no matter how hard they try, they cannot communicate their intelligence to their teachers” (Fritzberg, 2001). This may partly be a result of valuing certain kinds of abilities and strengths over others in the typical school environment, a situation which some researchers have suggested ameliorating by building instruction on students’ highly developed interpersonal abilities or real-world skills (Delpit, 2006). The inclusion of hip-hop music in the classroom is another way to help students recognize that they already possess many capacities which can be used to “develop positive identities” (Berry, 1994, quoted in Sullivan, 2003). By moving towards purposeful cultivation of such identities for *all* children, we can begin to create more reliable bridges between teachers and students – bridges that will enable messages to travel regularly in both directions.

A functioning channel of communication based on shared knowledge between students and teachers is crucial, but sometimes simply receiving a message does not mean it will be viewed as relevant and, therefore, worth processing. Rap and related genres of music, however, can easily help educators inspire greater levels of attention among a higher percentage of students than is often the case with more routine methods of instruction. Sullivan’s (2003) research indicates that rap is very popular among young people of all races, reducing concerns that such an approach would be appreciated only by one ethnic group or another, and whether or not hip-hop is in fact an accurate reflection of “real life,” many students believe that it is (Sullivan, 2003; Taylor and Taylor, 2004) – a quality which could serve to diminish student cries that what takes place at school has no relevance to what happens anywhere else.

Furthermore, it is important to note that research supporting hip-hop's presence in the classroom is by no means intended to exclude more traditional methods and topics but instead to facilitate, enhance, and add to them, as it did in one teacher's lesson on poetry. These particular students were able to parlay the interest piqued by discussions of the DMX song "I Miss You" into a more highly developed sense of poetic tone (Alexander-Smith, 2004). Barton and Hamilton (2002) developed a hip-hop curriculum to bridge the vast span between the extracurricular culture and academics, and related the critical underpinnings of hip hop text to traditional language arts curriculum. Katherine Wills (2002) noted the difficulty of connecting with young urban middle school students while conducting a free summer camp, and observed that the students "feel that verbal texts pale in comparison to the computer-generated features of Hip Hop music icons in commercial web sites" (Wills, 2002, pg. 8). Furthermore, Wills and her graduate students found that without connecting writing exercises to hip-hop, the students were unwilling to participate.

The founding members of Flocabulary, who have toured the country performing student shows and workshops, have witnessed moments like those mentioned above hundreds of times. When educators demonstrate that they respect a genre students believe can "teach [them] things or tell [them] things about life" (Sullivan, 2003), they may find students more willing to receive information and actively participate.

In general, the case for explicit vocabulary instruction for middle school students is extremely strong. Numerous studies have documented the significant, positive impact of direct vocabulary instruction on both immediate word learning and longer-term reading comprehension (Baker, Kame'enui, & Simmons, 1995; Beck, McKeown, & Kucan, 2002; Biemiller, 2004). A meta-analysis by Stahl and Fairbanks (1986) reported an average effect size of .91, demonstrating a correlation of increased vocabulary acquisition with significant, concomitant gains in comprehension. This correlation exists for both native *and* English-language learners (García, 1991; Coady & Huckin, 1997; Schmitt & McCarthy, 1997).

In 2000, the Report of the National Reading Panel identified vocabulary instruction as one of the three key elements in teaching reading comprehension (NRP, 2000). Furthermore, since word knowledge affects speaking, reading, and writing in all subject areas, research has shown that vocabulary size correlates with academic success across the curriculum (Laflamme, 1997; Ediger, 1999; Manning, 1999). For these reasons, Baker, Simmons, and Kameenui (1995) have called building a rich vocabulary crucial to academic development. Despite these significant findings, researchers have discovered that there is little direct vocabulary instruction in America's schools today (Watts, 1995). Biemiller (2001) has documented that this dearth of systematic vocabulary teaching extends from the elementary and middle school grades to many programs for English Language Learners.

In lieu of explicit vocabulary instruction, many educators rely on a student's ability to learn new words independently, mainly by analyzing contextual clues while reading. While emerging readers undoubtedly learn a large number of words while reading, research strongly indicates that contextual clues are unreliable for teaching word meaning. Beck *et al.* (2002) and Nagy *et al.* (1985) found that the likelihood of successfully deriving a word's meaning from its context varies from 5% to 15% for both native speakers and English-language learners. A study by Paribakht and Wesche (1997)

compared incidental vocabulary learning to direct instruction and found that while both led to considerable vocabulary gains over a three-month period, students who received the targeted instruction learned more words and gained of deeper understanding of those words than those students who learned exclusively from independent reading. Teaching students indirect vocabulary learning strategies is important for long term vocabulary growth, but these techniques must be complemented by targeted and systematic vocabulary instruction for students to excel at reading and writing. In Word Up, direct multi-media vocabulary instruction will be complemented by lesson plans for educators on teaching indirect word learning strategies.

There are many direct vocabulary instruction methods, and Flocabulary seeks to combine elements from the most effective methods, while leaving out those that research deems ineffective. As it turns out, many of the traditional vocabulary teaching strategies that have been in use for many years, most notably the definitional approach, do not lead to word mastery or ownership (Beck, McKeown and Omanson, 1987; Nagy & Scott, 2000). The traditional approach to teaching a student the meaning of a word was to direct her to the dictionary, show her how to decipher the symbols, and have her copy them into her notebook. More modern versions of this method include writing words and meanings on flashcards, or using workbooks that define the words first and foremost.

Unfortunately, all of these methods often fail to place the words in a readily understood and meaningful context. It should be noted that research *does* support this simple definitional instruction approach over indirect word learning or no instruction at all (Stahl, 1983), however Nagy (1988) found that the definitional approach does not increase reading comprehension. He makes the further point that if a student cannot comfortably use a word in a meaningful context, the word has not really been learned: "...knowing a word cannot be identified with knowing a definition...word knowledge is primarily procedural rather than declarative, a matter of *knowing how* rather than *knowing that*" (Nagy & Scott, 2000 p. 21).

Despite these arguments, the definitional method is still the foundation of most vocabulary teaching products by major educational publishers (Watts, 1995) through products like Vocabulary Workshop (Sadlier Oxford), Wordskills (McDougal Littell), and Wordly Wise 3000 (Educational Publishing Services). In all three cases, contextual information is provided, but the contextual examples are secondary to the definitions. Furthermore, integration, the important act of placing the new word within meanings that are previously understood by the student, is not always achieved (Christen and Murphy, 1991). This is especially true for minority students. Many commercial products display an over reliance on word/text level instruction including teacher presentation of a definition with work sheet practice, providing nothing more than exposure while expecting mastery (Sable, 1992). It is clear that in order to reach struggling students, especially those of a different culture, more effective techniques must be applied.

Key elements in an effective, systematic vocabulary program whose goal is to increase not only word knowledge, but also reading comprehension skills are *integration*, *repetition*, and *meaningful use* (Nagy, 1988). Furthermore each lesson must teach the optimal number of useful, level-appropriate words (Stahl, 1999), the lessons must connect with the student in a culturally relevant way (Parson & Kritsonis, 2006), and the program must inspire students to pursue additional word knowledge on their own (Nagy & Scott, 2000).

Few students can successfully learn a word after having read or heard it once since words are complex entities with different uses and shades of meaning. Consequently, researchers have found strong evidence in favor of providing students with multiple exposures to new words (Blachowicz & Fisher, 2000; Stahl & Fairbanks, 1986). Ideally students should encounter a new word in many different formats (text, audio, video) as well as many different contexts (formal, informal, conversational) with different shades of meaning. Additionally, research also supports repeating each exposure until students have internalized the word in question and can demonstrate their understanding (Stahl and Fairbanks, 1986).

The third factor in this equation for effective direct instruction is meaningful use. Nagy (1988) found that when students are called upon to think critically and creatively about words and make inferences based on what they've learned, they are more likely to retain the word knowledge.

Research has also found that instruction combining definitional information with semantic development, personalization, and/or the rich manipulation of words results in superior word learning (Bos & Anders, 1990; Stahl, 1983). The benefits of active semantic study have been established in the research on mapping, semantic feature analysis and semantic/syntactic feature analysis (Mckinnon 1993; Bos & Anders, 1990; Finesilver, 1994). The impacts of the personalization of vocabulary learning have been investigated most thoroughly in the domains of self selection (Fisher & Danielsen, 1998; Dole, Sloan, & Trathen, 1995). These investigations indicate that students will choose words at or above their grade level, and improve long term retention for words encountered in general literature. In a study of second graders, comprehension rose from the 35<sup>th</sup> to the 45<sup>th</sup> percentile in a program of vocabulary presented through story telling and discussion, the greatest being demonstrated when the participants found the story to be interesting (Elley, 1988). Each rap song / video in Word Up will begin each lesson by telling an interesting, narrative-driven, culturally-significant story, while simultaneously defining vocabulary words in the lyrics.

Within the study of vocabulary acquisition, the use of mnemonics has been shown to be one of the most effective ways to teach word knowledge (NRP, 2000). Mnemonics can be defined as any specific strategy that helps students memorize and retain information, which most commonly involve creating acronyms, rhymes, or the keyword method. Research has shown that students who employ the keyword method show marked improvement in definition recall, sentence comprehension and story comprehension (Levin, 1993; Levin, Levin, Glassman & Nordwall, 1992). Other studies support the use of images (Carr & Mazur-Stewart, 1988; Smith, et al., 1994) and kinesthetic performance related to meaning (Duffelmeyer, 1980). In general, the present body of research suggests that mnemonic techniques are superior to rote memorization not only in the amount of information stored, but that this information is often applied better in number contexts (Levin, 1988). Flocabulary's Word Up will use the mnemonic techniques of rhymes inherent in rap lyrics and visual images inherent in videos and games to achieve lasting word knowledge.

The final key element in Word Up is music, and a number of studies have found that music has demonstrable usefulness in an academic setting, both in focusing student attention (Toolan and Coleman, 1994) and in facilitating the encoding and retrieval of sequential verbal information (Wolfe and Horn, 1993; Shehan, 1981; Wallace, 1994).

Wallace and Rubin (1988) have found that music can dramatically enhance retention by creating long-lasting relationships between pieces of information, especially if the material is entertaining to the audience. This phenomenon is easily seen in America's classrooms today: students who rarely speak in class and struggle to complete exams often have the lyrics to hundreds of their favorite songs memorized. Much of this has to do with interest and motivation, but researchers have found that apart from those factors, lyrics, especially those paired with a catchy melody, are easier to memorize than straight text (Wallace & Rubin, 1988). Cognitive studies that assess differences in activity between the right and left temporal lobes strongly suggest that the memory of a song's lyrics is stored with the melody in memory (Pring & Walker, 2004).

However, Yalch (1991) determined that although songs facilitate recall, they do not necessarily facilitate recognition, indicating that students need more than just a song if they want to master information. Crucial to Word Up is that the music videos that define and use the vocabulary words in the lyrics will not represent the pinnacle of the lesson, but rather the principle exposure. Word Up will seek to teach word mastery by using not only music and videos, but differentiated instruction with contextual word use, integrated definitions, multiple exposures, and exercises that get students to think creatively about word meaning and use.

In summation, the use of multimedia and interactive computer technologies is crucial. Not only is it important to stimulate student interest in an age when video gaming, online video, music streaming and overall internet use is growing, but research indicates that harnessing these technologies can be, as the report to the National Reading Panel states, "a powerful way of increasing vocabulary" (NRP, 2000, p.4-26). Research has clearly shown the efficacy of computer and internet-based vocabulary teaching tools over textbook-based equivalents (Davidson, Elcock, & Noyes, 1996; Heise et al, 1991). The National Reading Panel Report calls for studies that seek to find "the optimal use of computer and other technologies in vocabulary instruction...[and] the precise role of multimedia learning in vocabulary acquisition" (NRP, 2000, p. 4-28). Flocabulary is in a position to answer that call.

There is a significant, well-supported need for Flocabulary's products in America today. Students of all backgrounds need innovative tools to help them become effective readers and writers. Further, they must be prepared for state assessments so that they can successfully graduate from high school. And students of minority groups must feel that their culture and interests are not ignored in the classroom, but are valued through relevant educational content. Just as we value students themselves, we must value their interests if we hope to maintain a connection in this diverse modern world.

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