

# Situated Word Inquiry: Supporting Inquiry and Language-Rich Environments through Technology-Mediated, Contextualized Word Learning

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**S**TUDYING THE 2000 U.S. GENERAL ELECTION, students read the word, “hanging chad.” A dictionary definition reveals “fragments from holes made in paper cards,” but leaves students dangling with uncertainty, which shortchanges the importance of this word in history. Is knowing the definition of “hanging chad” enough? When do we move learning a “simple” definition into something that has so many nuances over time and/or overwhelms the text that we’re trying to illuminate? Consider another example. When reading about democrats and republicans in a history lesson, a student noted, “there isn’t really a definition of a democrat.” As the teacher reflected on the entire conversation, he inferred that the student’s comments indicated a single definition was not enough (and the student knew it), but the student was not aware or ready for the broader concept of “democrat,” nor did the text offer the historical layers of word meanings. What are the just-right interventions when word learning is not unidimensional (right there in the text), but contextually derived? When does learning

a word help communicate with others and comprehend a text, and when does it actually distract from communication or derail content understanding? Like “democrat” or “republican,” words in the history classroom become entangled in the national political dialogue as individuals wrestle with the meaning of terms within the context of socio-political reality. This article offers an approach to vocabulary learning that situates words not as isolated concepts, but rather as ideas tethered to people, time, and place.

### **Words as Archeological Artifacts**

In order to understand the world, even before we are able to reflect on it, we need to name and categorize it. Words are the primary means of communication in the classroom and in society.<sup>1</sup> To understand the “texts” that constitute school and social life, one must grasp the general meaning of the words, as well as have some sense of the textured web of meaning that surrounds words as they reach out toward the time, place, and people that give them deeper meaning across a variety of contexts and usages. However, “we do not see first and then define, we define first and then see.”<sup>2</sup> As Steven Stahl has noted, “the knowledge of a word not only implies a definition, but also implies how that word fits into the world.”<sup>3</sup> For example, in 2006, President George W. Bush referred to himself as a “decider”—i.e., someone who gives judgement concerning a matter. Meaning in this context is less about the word and rather about who is using the word—The President of the United States. The word is an implied reference to the Constitutional powers of the Commander-in-Chief during wartime, specifically the Iraq War (though Congress has not issued a formal declaration of war since 1942). Simply defining a word neglects the contextual information that helps us understand that words are also value-laden terms developed out of complex cultural and historic processes.

### **To Read the World through Words**

Words as meaning-making tools help young people interpret the socio-political worlds in which they live and learn. Our previous work on how contextual influences shape word meanings suggests that foregrounding the role of socio-historical context, while leveraging the

unique affordances of web and mobile platforms, mimics disciplinary ways of knowing and thinking that students need to successfully learn history.<sup>4</sup> Modeling the habits of mind roused in history classrooms, *situated word inquiry* (SWI) is a non-linear, layered, and generative process of word learning. It is an inquiry-based, sense-making process of that differs from outcome-oriented approaches to vocabulary instruction, which often emphasizes a “correct” definition connected to a singular context to be recalled later during reading or assessment. SWI instead emphasizes contextual relationships with other words, concepts, ideologies, discourses, and the world as a means of positioning words in a shifting web of meaning. In the following sections, we demonstrate the ways in which SWI shifts how teachers and students approach words, explain how SWI fits into existing vocabulary practices, offer research-informed applications, and discuss implications for vocabulary teaching and learning.

### **Situated Word Inquiry (SWI)**

During the 2016-2017 academic year, we worked with a middle school teacher in an urban school district in the Southeastern United States to describe what situated word inquiry would look like in the history classroom. In a lesson on the Civil Rights Movement, students read a contemporary text about the Supreme Court case *Swann v. Charlotte-Mecklenburg Board of Education* (1971), which integrated schools in Charlotte, North Carolina. The text contains several instances of the word “busing,” which the teacher assumed students would understand. Instead, students defined the word from their present context, with one stating, “It’s just transportation and that doesn’t apply.” Students even looked up the word in the dictionary to see if they had missed some aspect of the word meaning (e.g., communal vehicle transportation or removal of tableware). The teacher prompted students to identify the context of the word by asking, “What are you forgetting to do with this word?” This led students to examine who was using the word and to consider the time period. Students conducted Internet word searches of images associated with the word and made the connection to forced busing. Yet they did not fully grasp the word complexity (i.e., economic empowerment of the oppressed in contrast to racial and socio-economic conflicts that led to school riots and community protests)

as the word would be referenced in other Civil Rights documents (e.g., Birmingham Bus Boycotts). Together, students, with the help of the teacher, created an interactive word path, hyperlinking social, cultural, and historical meanings of busing to people, places, time, and texts. The word “busing” and its meaning became the central thread that allowed students to make connections across sources and to weave together evidence supporting their understanding of the American Civil Rights Movement.

While at first glance, this seems like good history teaching, the emphasis on a word and word learning in context provided a purpose for reading and sense-making—the opportunity for students to grapple with interpretations without judgement of being right or wrong.<sup>5</sup> As this middle school teacher reflected in post-intervention interviews:

SWI is more than just the definition. It leads students to seek the relevance and context of words. This integrated process makes word learning the focus of instruction rather than an exercise prior to reading or word lectures. SWI helps students unpack the significance of the word and makes words fit in a broader context.

This approach to vocabulary asks students to think about the world that words open up in and beyond texts.

An important shift for this teacher was her realization that explicit vocabulary instruction no longer needed to compete with content instructional time. Rather, SWI supported and integrated disciplinary literacy, inquiry, and word learning into history lessons. This teacher noted, “For 60% of kids, general vocabulary instruction (e.g., vocabulary journals) helps them learn key terms; however, for the other 40%, these [out-of-class] vocabulary exercises were not helping them understand the terms. Knowing a word meaning for these students was not enough.” With SWI, this middle school teacher made space for sense-making of terms across texts and within texts, created visual links among words with graphic organizers and iconic images, and explicitly explored differences in word meanings to ensure students were paying attention to word usage across contexts. Her use of SWI was to make sure students could understand what a word meant in one era as compared to another, as well as the socio-political influence of these temporally bounded words. She thoughtfully concluded, “It’s not that students need to know a definition. They need to know the relevance and context of a word so students will understand how words convey differing cultural messages.”

## *Words as Learning Power*

Words are the nexus between knowledge and understanding of socio-political worlds—in school and life—but as the teacher in our study noted, word knowledge is not a level playing field. Although word knowledge in schooling predicts reading comprehension,<sup>6</sup> standardized achievement levels,<sup>7</sup> and long-term educational attainment,<sup>8</sup> all students do not enjoy equitable access to words and text.<sup>9</sup> Differences in word exposure and mastery are reflected in students' reading comprehension and literacy.<sup>10</sup> The demands of vocabulary are even more acute for growing numbers of English language learners (ELLs), to whom academic and disciplinary language particularly in history represents an additional language.<sup>11</sup> As students move through primary, secondary, and post-secondary schooling, the rigors of abstract academic language and discipline-specific vocabulary place ever greater demands on word knowledge.<sup>12</sup>

Given its prominence in academic success, vocabulary instruction has taken on additional salience in standards, curricula, and assessment over the last decade.<sup>13</sup> At the same time, digital technologies have burgeoned, now offering today's learners unprecedented access to learning opportunities not previously possible.<sup>14</sup> Despite its potential and pervasiveness in today's classrooms,<sup>15</sup> technology remains under-utilized as a tool for vocabulary instruction,<sup>16</sup> and vocabulary instruction tends to model general rather than disciplinary specific practices,<sup>17</sup> falling far short of the language-rich environments of history classrooms. Blending the merit of computer-mediated word learning with disciplinary literacies, SWI emerges as an approach to reframe word learning. To explain, we offer a discussion of each in the subsequent sections.

### **Reframing Word Learning in Today's History Classroom**

#### *Limits of "Best Practices" in Vocabulary Instruction*

Attending to word knowledge differences, teachers emphasize vocabulary teaching and learning using print and analog materials.<sup>18</sup> While direct, purposive vocabulary instruction for all students at all academic levels can improve vocabulary<sup>19</sup> and is particularly effective at addressing extant differences in students' exposure to

words,<sup>20</sup> it becomes in practice a “mere repetition or drill of the word.”<sup>21</sup> In contrast, using a contextual approach to instruction provides greater and more long-lasting vocabulary gains compared with lessons that emphasized learning definitions alone.<sup>22</sup> However, the term “contextual approach” as referenced in Nash and Snowling’s research suggests “using pieces of information (cues) in the context to infer the meanings of target words.”<sup>23</sup> “Pieces” are not the same as historians’ views and instead refer to synonyms, antonyms, and descriptive cues that explicate part of the word’s meaning.

While direct instruction is important, there are far too many words in school and the history classroom to teach all of them individually.<sup>24</sup> Consequently, most word learning is achieved through context and/or incidentally, particularly through wide reading, oral language, and listening to texts.<sup>25</sup> While teachers have limited influence over students’ practices and procedures during times of incidental word learning, they can explicitly teach word learning strategies that help students maximize incidental word learning. Word learning strategies common in English/Language Arts (ELA) classrooms might address morphology and word origins,<sup>26</sup> identifying important words within texts,<sup>27</sup> or methods of contextual analysis.<sup>28</sup> Outside of ELA, mathematics teachers may focus on strategies for navigating what are often conceptually dense texts.<sup>29</sup> In social studies, though, teachers must address how students can build word meanings in relation to persons, events, and places.<sup>30</sup> This situates how a student approaches a word meaning as discipline-specific and requires students to know the difference, as well as when to apply these varying emphases.

### *Possibilities of Technology-Mediated Word Learning*

Digital technology enables numerous ways to support and augment word learning by harnessing the ease with which users can access, transmit, produce, and share texts across a variety of modes, such as writing, audio, graphic, video, and social media.<sup>31</sup> This enables active and dynamic engagement with texts, and expands the potential meaning(s) of words through interaction with multimedia tools such as vocabulary games, word clouds, digital vocabulary field trips, and visual representations of words.<sup>32</sup> The result is multiple exposures to words in a variety of contexts. Vocabulary instruction that uses multiple context-dependent anchors more effectively supports

student vocabulary development, but also offers opportunities to learn words in authentic disciplinary contexts.<sup>33</sup> Furthermore, as Bridget Dalton and Dana Grisham suggest, digital tools such as discussion forums, which mediate learning activities, may prompt students to revisit terms and meanings of terms in ways that promote deep understanding.<sup>34</sup>

Multimedia represents a way to increase reading volume, which is important for increasing exposure to text, text genres, reading comprehension, and incidental word learning.<sup>35</sup> Encountering words in digital text vs. print sources increases incidental word learning.<sup>36</sup> The hyperlinking capacity of online text often provides a textual experience that connects to visual, audio, and video resources related to the words and ideas being studied in real time. Digital texts also offer anytime-anywhere accessibility.<sup>37</sup> Moreover, digital technology supports efforts to individualize and personalize word learning based on the unique needs and interests of students. Of particular importance for ELLs and those that have had limited exposure to words and text, language translators link audio pronunciations and multimedia reference tools that provide “just-in-time”<sup>38</sup> reading support while developing students’ ability to engage in self-directed, strategic vocabulary learning.

Digital tools enable students to become generators, not just consumers, of text through creating and sharing vocabulary representations across multiple modes.<sup>39</sup> In addition, today’s technology facilitates the sharing of text(s) along with a variety of ways to read, publish, and disseminate student-generated text. Reading, assessing, and learning from text created by peers, along with more traditional sources of knowledge, promotes digital literacies and encourages participation in communities of learners.<sup>40</sup> Authentic, social, and mobile activities can produce learners who are “voraciously engaged” in word learning, with the potential to transform literacy learning into “an authentic seamless learning experience.”<sup>41</sup>

### *Value of Language-Rich Environments*

Word learning reaches far beyond the vocabulary practices of teachers and students. Scholars have long called for the development of language-rich environments as a means of enhancing word learning and literacy skills.<sup>42</sup> In language-rich environments, “Teachers and

students attend to and celebrate language in all forms and contexts including orally, in writing, while reading, and in specific content areas.”<sup>43</sup> Discussion, dialogue, and the sharing of ideas are hallmarks of these environments,<sup>44</sup> as is the incorporation of cognitive skills into vocabulary and literacy instruction across disciplines.<sup>45</sup> In addition to representing an infinitely rich source of text and language, Internet and mobile environments include integrated, multi-modal platforms for learning, sharing, and discussing. Thus, the richness of the word-learning context in language-rich environments, not just redundancy of exposures, facilitates a deep understanding of words.<sup>46</sup> However, context typically references the *on-the-page* architecture of a specific text in which a term occurs. This is different from socio-historical context of a word, which is more akin to an understanding of people, place, and time that helps give a term meaning in unique situations,<sup>47</sup> like that found in situated word inquiry.

### **Learning with Situated Word Inquiry**

Situated word inquiry is a non-linear, layered, and generative process of word learning embedded in technology-mediated contexts. SWI moves beyond the notion that word meanings are subsumed by singular definitions, or by what is (or is not) “on the page,” toward a fluid, context-dependent word-learning process supported by rich digital landscapes. While we recognize that vocabulary instruction is often intended simply to communicate the general meaning of a word, we assert that there is space within the realm of vocabulary teaching and learning for a deeper study of words as a form of inquiry that can delve into their multi-layered and highly contextual meanings. In this section, we will describe how SWI models empirically-based best practices in word learning, while incorporating cognitive skills instruction and supporting a language-rich learning environment.

Understanding a text requires more than knowing the meaning of each individual word or phrase. Words have relationships with other words, concepts, and discourses outside of the text in which they are being encountered. All of these connections contribute something to a word’s meaning. The same word, encountered in different contexts, acquires different shades of meaning, as each context makes its own demands based on things like authorship,

voice, and requisite disciplinary knowledge. Thus, in addition to on-the-page meaning, SWI builds what might variously be called “meaning pathways” or “webs of meaning.”

Online/mobile platforms open up words for exploration in ways that were not possible using print media. A five-second Internet search will yield multiple, varying instances of a target word across contexts (e.g., reference materials, news articles, blogs) and modalities, which can quickly be further refined to show instances of the word’s current or historical usage, usage in combination with other terms, or usage in video or print media titles. These various sources generate the non-linear, layered meaning pathways prized by situated word inquiry.

The complex word meanings uncovered by SWI call for increased attention to cognitive skills instruction during vocabulary building activities. One way in which SWI builds cognitive skills is through inquiry. When words are positioned in a web of meaning, word learning requires students to discover various meanings, evaluate the value of those meanings, filter them through background knowledge, and make critical decisions about how context influences meaning. The online/mobile orientation of SWI facilitates inquiry like following up on hunches, supporting judgements with evidence, and sharing discoveries with a community of learners.<sup>48</sup> The process of following various meaning webs across modalities entails multiple exposures and builds semantic, lexical, and socio-historical context. As students encounter target words in different formats, they can be guided in ways that build critical thinking and critical literacy.

One of the most promising aspects of SWI is that it represents one way to release explicit, direct, and purposeful vocabulary instruction from ELA, spreading it over the curriculum. Deep word learning as a form of inquiry incorporates knowledge and skills of the disciplines into vocabulary instruction. A mathematics teacher might ask students to explore how seemingly arcane mathematics concepts and vocabulary are part of everyday life. The social studies teacher may use words that have “gone viral” on social media to teach current events and the ways that time, people, and place affect word meanings.<sup>49</sup>

As a form of explicit word learning that leverages digital technology to provide multiple exposures across a variety of contexts, SWI supports the best practices in direct vocabulary instruction. It also provides rich opportunities for indirect word learning. A



### Take Action! Sidebar

1. Encourage student interest in words and phrases and their contexts through reading aloud and drawing attention to interesting words and unusual usages of words. Increasing awareness of words helps students notice and question words and word usage. This also leads to the identification of words that need further explanation that can be derived from SWI.
2. Ask students to examine Words of the Year from sources such as Merriam-Webster (<<https://www.merriam-webster.com/words-at-play/woty2016-top-looked-up-words-surreal>>) and Oxford Dictionary (<<https://en.oxforddictionaries.com/word-of-the-year/word-of-the-year-2016>>). Each Word of the Year represents a story about how it came to be chosen and the context for the word over time.
3. Model using SWI. Newspaper articles make excellent resources for words that imply larger meaning without detailed descriptions about the word.
4. Practice SWI with classroom texts. When reading a passage, ask students to identify words that might represent a larger story or context to the reading, and then explore one or two of the words using multiple online sources rather than a single dictionary.
5. Use SWI as a teacher “Search Aloud” to model digital inquiry as a pathway for unpacking the stories behind words and to unveil how words are tethered to people and the ways they use them, as well as the importance of time and place in explaining nuanced meanings.
6. Use interactive etymologies (e.g., etytree via Wikimedia’s Toolforge at <<https://tools.wmflabs.org/etytree/>>) to explore word origins as an introduction to SWI. An example of a search for “civil rights” used in the middle school classroom is found in **Figure 1**.

## Applications and Challenges of Situated Word Inquiry

### *Google It*

When we want quick information about something, we often turn to Internet search engines. We “Google it.” This typically provides hundreds (or thousands) of hits covering virtually every aspect of a topic, and results can quickly be refined topically or temporally in order to focus in on specific aspects of the query. As a thought exercise, consider the common practice of Googling a person (go ahead and Google yourself!). Unlike most vocabulary words, people do not have dictionary definitions, so this exercise can provide an interesting exemplar of what kinds of things a web-based search for meaning may (or may not) reveal. Firstly, a traditional dictionary definition of something as complex and context-laden as a person would have little practical value. It would almost certainly lack the depth and detail needed to define or describe. On the other hand, sifting through Google hits would likely lead to numerous fragments of information that serve to contextualize the individual, such as professional affiliations, voter registration records, and newsworthy accomplishments. Examining the person’s social media presence would likely provide additional connected, yet different pieces of information. Notably, Googling someone does not provide any direction on what to do with these fragments and pieces. Any meaning drawn from the exercise must be constructed through the “cognitive labour” of the meaning seeker.<sup>51</sup> Thus, Googling a person models the intellectual processes that give words, ideas, and even people meaning in the world, where “definitions” are incomplete, context-dependent, and contested. We suggest that SWI can provide a similar web of meaning for words and concepts in the classroom.

**Evolution.** Defining the word “evolution” would presumably suffice in terms of basic scientific utility, but would likely be inadequate to account for the historical, social, and scientific significance of the term. However, an Internet search for the term would likely produce a wealth of information across various modalities and contexts. Browsing the first page of search engine results, we see the literal definition first, followed by links to:

a rather robust Wikipedia page, a PBS multimedia site, several news stories, the academic journal *Evolution*, and several other multimedia sites by LiveScience, the National Academy of Sciences, and National Geographic. Just these initial hits address the history, scientific value, social and educational controversy, and most current academic debates around evolution.

**Bailout.** Recent research on how the “Words of the Year” (WsOY) designated by dictionary publishers can promote word learning and disciplinary thinking in social studies provides another example.<sup>52</sup> In 2008, Merriam-Webster designated the term “bailout” as one (of ten total) WsOY.<sup>53</sup> As many readers will recall, 2008 marked the beginning of the financial crisis known as the Great Recession, wherein the U.S. government provided large loans to a number of troubled banks as a way to shore up the financial system. These bailouts would become the subject of news stories and political debates for years to follow. A search for a dictionary definition of “bailout” during 2008 might have produced, if anything, an allusion to removing water from a leaking boat. An online dictionary search today provides the more accurate reference to a rescue from financial distress. A search engine query for “bailout” also provides a variety of sources related to the historical events surrounding the term, as well as current news topics related to the now broader conception of the term as a catch-all for government actions taken on behalf of business and financial interests. Digging into the social context of the term may lead to media such as “The Bailout Rap,” a recording from 2008 by Gregg Somerville, a forty-seven-year-old stockbroker at the time, with more than forty thousand hits on YouTube.<sup>54</sup> This example highlights how computer-mediated word learning can capture the nuances of historical vocabulary as well as words related to current events that are just in the process of becoming vernacular.

**Plane.** Suppose students encounter the term “plane” in the following excerpt of informational text:

Unfortunately, only a few wood planes have survived from the Roman times, the Middle Ages and the Renaissance. What we do know about them comes from the wood carvings, insignias, manuscripts, and the stories told by stained glass windows.<sup>55</sup>

Students might also encounter a similar usage of this term in fifteenth-century literature (see the anonymous poem, “The Debate of the Carpenter’s Tools”). These texts are referring to the carpentry tool for smoothing wood. Students may first think of aircraft and wonder, “Did the Romans have those kinds of planes?” An online search of the dictionary would reveal that the wood plane has at least eight distinct definitions at Merriam-Webster. The top hits from a Google search reference exclusively modern aircraft and mathematical planes. Wikipedia has scores of entries for the term “plane.” One must dig deeply to find any reference to the wood plane in any of these sources. Combining the term “plane” with some other terms from the text (e.g., “wood plane” or “Roman stained glass”) garners search results that are much closer to the target meaning.

These examples highlight the notion that SWI is not simply “Googling it.” Just as the extremely precise and concise nature of dictionary definitions can produce confusion and misunderstanding for students,<sup>56</sup> the wideness and richness of online context can also make targeted word learning a challenge. SWI is best taught as an instructor-scaffolded process of inquiry that values *cognition* and the *process* of technology-mediated word learning; a reasoning method that views mistakes as places for learning and sense-making, and produces an understanding of vocabulary as a linguistically complex web of meaning rather than a definition isolated from context and usage.

### Discussion and Conclusion

Situated word inquiry raises important questions about “whose cognitive labour” produces knowledge about word meanings.<sup>57</sup> Did the dictionary provide meaning, the teacher, or the student? In this article, we offer a word learning approach in which words can be used to generate student discovery and invite student-initiated inquiry. Along the continuum of *obvious* (teacher-given) to *obscure* (student arrived-at),<sup>58</sup> SWI is centered on the latter. However, SWI is not intended to supplant other forms of vocabulary instruction and word learning, but to strategically expand these processes a) in instances where words have multiple, layered meanings tethered to people, places, and/or points in time, or b) when vocabulary instruction can

be used to support language-rich environments. SWI can sit easily alongside more utilitarian forms of vocabulary instruction as a way to model inquiry and disciplinary thinking through situated cognition.

In closing, we highlight three defining features of SWI in relation to vocabulary instruction more broadly. First, SWI highlights the power and potential of online, mobile, and social media to promote the kind of rich and highly accessible word learning that has been previously beyond the reach of most students and teachers. Second, SWI emphasizes socio-historical (extra-textual) context rather than on-the-page (inter-textual) cues to build a web of meaning around words that highlight the importance of time, place, and people, a critical tool for understanding the world in which we live.<sup>59</sup> Third, SWI positions reasoning about word learning as a process of inquiry based on cognitive strategies, with the potential to build self-sufficient word learners that can apply the processes modeled by SWI to encounters with new words across the curriculum and in daily life. This aspect of SWI acquires additional relevance as readers begin to encounter complex academic and disciplinary texts, where the understanding of words entails an ever-shifting mix of background knowledge, disciplinary understanding, and contextual factors.

Just-in-time scaffolding from instructors, like our middle school teacher exemplified, will be imperative as students develop the knowledge, skills, and experiences needed to practice SWI. Simple Internet searches do not always facilitate efficient word learning. Thus, it is worth restating that SWI implies much more than *Googling it*. As we have endeavored to demonstrate, the Internet and mobile technology are very effective at gathering, sorting, and making accessible complex information in a contextually nuanced and multimodal fashion. With sufficient practice and support, many learners will discern meaning through digital sources and quickly assimilate its spectrum of ideas, just as each of us does regularly.

## Notes

1. Gunther Kress, *Literacy in the New Media Age* (New York: Routledge, 2003).
2. Francesco Benigno, *Words in Time: A Plea for Historical Re-Thinking* (New York: Routledge, 2017), 1.
3. Steven A. Stahl, "Four Problems With Teaching Word Meanings," in *Teaching and Learning Vocabulary: Bringing Research to Practice*, ed. Elfrieda H. Hiebert and Michael L. Kamil (Mahwah, NJ: Lawrence Erlbaum Associates, 2005), 95.
4. Tina L. Heafner, Nicholas Triplett, Laura Handler, and Dixie Massey, "Situated Word Learning: Words of the Year (WsOY) and Social Studies Inquiry," *Theory and Research in Social Education* 46, no. 1 (January-March 2018): 1-39.
5. Tina L. Heafner, "Reading as a Tool of Thinking and Learning in Social Studies," *Social Studies Journal* 37, no. 2 (Fall 2017): 6-22, <<https://pcssonline.org/wp-content/uploads/2017/11/SSJFall17Updated.pdf>>.
6. James F. Baumann and Edward J. Kame'enui, eds., *Vocabulary Instruction: Research to Practice* (New York: The Guilford Press, 2004); P. David Pearson, Elfrieda H. Hiebert, and Michael L. Kamil, "Vocabulary Assessment: What We Know and What We Need to Learn," *Reading Research Quarterly* 42, no. 2 (April-June 2007): 282-296.
7. Loren M. Marulis and Susan B. Neuman, "The Effects of Vocabulary Intervention on Young Children's Word Learning: A Meta-Analysis," *Review of Educational Research* 80, no. 3 (September 2010): 300-335; Steven A. Stahl and Marilyn M. Fairbanks, "The Effects of Vocabulary Instruction: A Model-Based Meta-Analysis," *Review of Educational Research* 56, no. 1 (Spring 1986): 72-110.
8. Anne E. Cunningham and Keith E. Stanovich, "Early Reading Acquisition and Its Relation to Reading Experience and Ability 10 Years Later," *Developmental Psychology* 33, no. 6 (November 1997): 934-945; National Reading Panel, *Report of the National Reading Panel: Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction* (NIH Publication No. 00-4769) (Washington, DC: U.S. Government Printing Office, 2000).
9. Betty Hart and Todd R. Risley, *Meaningful Differences in the Everyday Experience of Young American Children* (Baltimore, MD: Paul H. Brookes Publishing, 1995).
10. Baumann and Kame'enui, *Vocabulary Instruction*; Jeanne S. Chall and Vicki A. Jacobs, "Poor Children's Fourth-Grade Slump," *American Educator* 27, no. 1 (Spring 2003): 14-15, 44; Pearson, Hiebert, and Kamil, "Vocabulary Assessment."
11. Bridget Dalton and Dana L. Grisham, "eVoc Strategies: 10 Ways to Use Technology to Build Vocabulary," *The Reading Teacher* 64, no. 5 (February 2011): 306-317.
12. Zhihui Fang, Mary J. Schleppegrell, and Beverly E. Cox, "Understanding the Language Demands of Schooling: Nouns in Academic Registers," *Journal of Literacy Research* 38, no. 3 (September 2006): 247-273; Jeff Zwiers, *Building*

*Academic Language: Essential Practices for Content Classrooms, Grades 5-12* (San Francisco, CA: Jossey-Bass, 2007).

13. National Governors Association Center for Best Practices (NGA Center) and Council of Chief State School Officers (CCSSO), *Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects* (Washington, DC: National Governors Association, 2010).

14. Thomas DeVere Wolsey, Linda Smetana, and Dana L. Grisham, "Vocabulary Plus Technology: An After-Reading Approach to Develop Deep Word Learning," *The Reading Teacher* 68, no. 6 (March 2015): 449-458; Dalton and Grisham, "eVoc Strategies."

15. U.S. Department of Education, Office of Educational Technology, *Transforming American Education: Learning Powered by Technology. National Education Technology Plan, 2010* (Washington, DC: U.S. Department of Education, 2010); John Wells, Laurie Lewis, and Bernard Greene, *Internet Access in U.S. Public Schools and Classrooms: 1994-2005. Highlights. NCES 2007-020* (Washington, DC: National Center for Education Statistics, 2006).

16. Jennifer I. Berne and Camille L. Z. Blachowicz, "What Reading Teachers Say About Vocabulary Instruction: Voices from the Classroom," *The Reading Teacher* 62, no. 4 (December 2008): 314-323.

17. Sam Wineburg, "Historical Thinking and Other Unnatural Acts," *Phi Delta Kappan* 92, no. 4 (December 2010): 81-94.

18. Shari Butler, Kelsi Urrutia, Annetta Buenger, Nina Gonzalez, Marla Hunt, and Corinne Eisenhart, *A Review of the Current Research on Vocabulary Instruction* (Washington, DC: National Reading Technical Assistance Center, 2010), <<https://www2.ed.gov/programs/readingfirst/support/rmcfinal1.pdf>>; Sheelah M. Sweeny and Pamela A. Mason, *Research-Based Practices in Vocabulary Instruction: An Analysis of What Works in Grades PreK-12* (West Barnstable, MA: Studies & Research Committee of the Massachusetts Reading Association, 2011).

19. Pearson, Hiebert, and Kamil, "Vocabulary Assessment"; Zwiers, *Building Academic Language*.

20. Amy M. Elleman, Endia J. Lindo, Paul Morphy, and Donald L. Compton, "The Impact of Vocabulary Instruction on Passage-Level Comprehension of School-Age Children: A Meta-Analysis," *Journal of Research on Educational Effectiveness* 2, no. 1 (2009): 1-44; Marulis and Neuman, "The Effects of Vocabulary Intervention."

21. Stahl, "Four Problems With Teaching Word Meanings," 108.

22. Hannah Nash and Margaret Snowling, "Teaching New Words to Children with Poor Existing Vocabulary Knowledge: A Controlled Evaluation of the Definition and Context Methods," *International Journal of Language and Communication Disorders* 41, no. 3 (May-June 2006): 335-354.

23. Nash and Snowling, "Teaching New Words to Children," 337.

24. Isabel L. Beck, Margaret G. McKeown, and Linda Kucan, *Bringing Words to Life: Robust Vocabulary Instruction*, second ed. (New York: The Guilford Press, 2013); James W. Loewen, *Teaching What "Really" Happened: How to Avoid the*

*Tyranny of Textbooks and Get Students Excited About Doing History* (New York: Teachers College Press, 2010); J. Ron Nelson and Scott A. Stage, "Fostering the Development of Vocabulary Knowledge and Reading Comprehension through Contextually-Based Multiple Meaning Vocabulary Instruction," *Education and Treatment of Children* 30, no. 1 (February 2007): 1-22.

25. Sweeny and Mason, *Research-Based Practices in Vocabulary Instruction*.
26. Beck, McKeown, and Kucan, *Bringing Words to Life*.
27. Dalton and Grisham, "eVoc Strategies."
28. Nash and Snowling, "Teaching New Words to Children."
29. Janice M. Harmon, Wanda B. Hedrick, and Karen D. Wood, "Research on Vocabulary Instruction in the Content Areas: Implications for Struggling Readers," *Reading & Writing Quarterly* 21, no. 3 (July-September 2005): 261-280; Vicki J. Schell, "Learning Partners: Reading and Mathematics," *The Reading Teacher* 35, no. 5 (February 1982): 544-548.
30. Janis M. Harmon, David S. Katims, and D'Ette Whittington, "Helping Middle School Students Learn with Social Studies Texts," *TEACHING Exceptional Children* 32, no. 1 (September-October 1999): 70-75.
31. Gunther Kress, "Multimodality," in *Multiliteracies: Literacy Learning and the Design of Social Futures*, ed. Bill Cope and Mary Kalantzis (New York: Routledge, 2000), 182-202; Gunther Kress and Theo van Leeuwen, *Reading Images: The Grammar of Visual Design* (London, United Kingdom: Routledge, 1996); Wolsey, Smetana, and Grisham, "Vocabulary Plus Technology."
32. Dalton and Grisham, "eVoc Strategies."
33. Michael D. Coyne, D. Betsy McCoach, and Sharon Kapp, "Vocabulary Intervention for Kindergarten Students: Comparing Extended Instruction to Embedded Instruction and Incidental Exposure," *Learning Disability Quarterly* 30, no. 2 (Spring 2007): 74-88; Nash and Snowling, "Teaching New Words to Children."
34. Dalton and Grisham, "eVoc Strategies."
35. Anne E. Cunningham and Keith E. Stanovich, "What Reading Does for the Mind," *American Educator* 22, no. 1-2 (Spring-Summer 1998): 8-15; William Nagy, "Why Vocabulary Instruction Needs to be Long-Term and Comprehensive," in *Teaching and Learning Vocabulary: Bringing Research to Practice*, ed. Elfrieda H. Hiebert and Michael L. Kamil (Mahwah, NJ: Lawrence Erlbaum Associates, 2005), 27-44.
36. Batia Laufer, "Electronic Dictionaries and Incidental Vocabulary Acquisition: Does Technology Make a Difference?" in *Proceedings of the 9<sup>th</sup> EURALEX International Congress* (Stuttgart, Germany: University of Stuttgart, 2000), 849-854.
37. Dalton and Grisham, "eVoc Strategies."
38. *Ibid.*, 312.
39. Ofelia R. Nikolova, "Effects of Student Participation in Authoring of Multimedia Materials on Student Acquisition of Vocabulary," *Language Learning & Technology* 6, no. 1 (January 2002): 100-122; Joy F. Xin and Herbert Rieth, "Video-Assisted Vocabulary Instruction for Elementary School Students with Learning Disabilities," *Information Technology in Childhood Education Annual* (2001): 87-103.

40. Mizuko Ito, Sonja Baumer, Matteo Bitanti et al., *Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media* (Cambridge, MA: The MIT Press, 2010).
41. L-H. Wong and C-K. Looi, "Vocabulary Learning by Mobile-Assisted Authentic Content Creation and Social Meaning-Making: Two Case Studies," *Journal of Computer Assisted Learning* 26, no. 5 (October 2010): 421.
42. Camille L. Z. Blachowicz, Peter J. L. Fisher, Donna Ogle, and Susan Watts-Taffe, "Vocabulary: Questions from the Classroom," *Reading Research Quarterly* 41, no. 4 (October-November-December 2006): 524-539; Michael R. Vitale and Nancy R. Romance, "Broadening Perspectives about Vocabulary Instruction: Implications for Classroom Practice," *The New England Reading Association Journal* 44, no. 1 (2008): 15-22.
43. Sweeny and Mason, *Research-Based Practices in Vocabulary Instruction*, 1.
44. Evelyn Ford-Connors and Jeanne R. Paratore, "Vocabulary Instruction in Fifth Grade and Beyond: Sources of Word Learning and Productive Contexts for Development," *Review of Educational Research* 85, no. 1 (March 2015): 50-91.
45. Sweeny and Mason, *Research-Based Practices in Vocabulary Instruction*.
46. Karla K. MacGregor, Li Sheng, and Tracy Ball, "Complexities of Expressive Word Learning Over Time," *Language, Speech, and Hearing Services in Schools* 38, no. 4 (October 2007): 353-364.
47. Benigno, *Words in Time*.
48. Dalton and Grisham, "eVoc Strategies."
49. Heafner, Triplett, Handler, and Massey, "Situated Word Learning."
50. Blachowicz, Fisher, Ogle, and Watts-Taffe, "Vocabulary: Questions from the Classroom"; Michael F. Graves, *The Vocabulary Book: Learning and Instruction* (New York: Teachers College Press, 2006); Nagy, "Why Vocabulary Instruction Needs to be Long-Term and Comprehensive."
51. Catherine McCrory, "The Knowledge Illusion: Who is Doing What Thinking?" *Teaching History* 161 (December 2015): 38.
52. Heafner, Triplett, Handler, and Massey, "Situated Word Learning."
53. Merriam-Webster, "Word of the Year Retrospective: Editors Choose Their Favorites Words from the Past Decade," 2014, <<https://www.merriam-webster.com/words-at-play/2014-word-of-the-year-retrospective/2008-bailout>>.
54. "The Bailout Rap," YouTube video, 5:26, posted by EJSKanye8585, 30 September 2008 <[https://www.youtube.com/watch?v=64g\\_g22iEe8](https://www.youtube.com/watch?v=64g_g22iEe8)>.
55. "TBT: The History of the Wood Plane," Toolbarn.com, 31 July 2014, <<http://blogs.toolbarn.com/2014/07/tbt-the-history-of-the-wood-plane/>>.
56. Beck, McKeown, and Kucan, *Bringing Words to Life*.
57. McCrory, "The Knowledge Illusion," 38.
58. Ibid., 47.
59. Benigno, *Words in Time*.

## Appendix

### More to Explore

1. **Lessons from ReadWriteThink:** Resources from ReadWriteThink (<<http://www.readwritethink.org>>) model baseline vocabulary approaches that can be modified for application with the situated word inquiry (SWI) approach.
2. **Reading Like a Historian:** Stanford History Education Group (<<https://sheg.stanford.edu/us>>) offers vocabulary lists that could be used to model SWI with students.
3. **Merriam-Webster's Words of the Year:** Publisher Words of the Year (e.g., <<https://www.merriam-webster.com/words-at-play/woty2016-top-looked-up-words-surreal>>) are excellent tools for teaching students the layered meanings of words and how words are tethered to people, places, and time.
4. **"What Makes a Word Real":** TEDxUofM Talk by Anne Curzan, March 2014 (<[https://www.ted.com/talks/anne\\_curzan\\_what\\_makes\\_a\\_word\\_real](https://www.ted.com/talks/anne_curzan_what_makes_a_word_real)>).
5. **"Go Ahead and Make Up New Words!":** TEDYouth 2014 Talk by Erin McKean, November 2014 (<[https://www.ted.com/talks/erin\\_mckean\\_go\\_ahead\\_make\\_up\\_new\\_words](https://www.ted.com/talks/erin_mckean_go_ahead_make_up_new_words)>).
6. **"The Inky Fool":** This blog by Mark Forsyth gives the stories behind words and phrases, and shows how some have evolved over time (<<https://blog.inkyfool.com/>>).
7. **Visual Thesaurus Word Map:** Create your own word map/visual thesaurus of key terms concepts: (<<https://www.visualthesaurus.com/app/view>>).