Since current research and theory question many of the traditional methods and techniques of teaching vocabulary, a study was made to determine the content of 55 college vocabulary texts and the extent to which the content was consistent with empirical evidence. The study investigated the techniques used to teach word knowledge and whether they were additive or generative in nature. Additive or word specific approaches emphasize predetermined sets of words, while generative approaches emphasize strategies for vocabulary learning beyond specific instructional materials. Analyses revealed that 89% of the texts employed an additive philosophy. The most prevalent instructional category found was the use of word element exercises, most of which contained isolated drills focusing on short-term memorization of definitions for targeted words. Results indicated that only 38% of the texts included contextual analysis as a vocabulary strategy and that only six textbooks using this strategy employed a generative approach. Findings also revealed that dictionary/reference was a common instructional approach for vocabulary development in commercial materials. Learning words from lists was found to be by far the most common additive-type exercise. Based on these findings, it was recommended that postsecondary vocabulary development materials (1) encourage independent vocabulary development, (2) stimulate a deeper understanding of words studied, (3) use actual texts to teach contextual analysis, (4) organize words in semantically-related sets when using an additive approach, (5) promote long-term vocabulary learning, and (6) be scrutinized for validity by textbook authors. (A six-page reference list, a list of texts analyzed, the text assessment worksheets, and a master list of College Reading and Learning Assistance Technical Reports are appended.) (JD)
Developing College Vocabulary:
A Content Analysis of Instructional Materials

Norman A. Stahl
Georgia State University

William G. Brozo
Northeastern Illinois University

Michele L. Simpson
University of Georgia

College Reading and Learning Assistance
Technical Report 86-07

Georgia State University

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

__________________________
Norman A. Stahl

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."
Abstract

Current research and theory question many of the traditional methods and techniques of teaching vocabulary. Yet textbooks designed to expand the vocabulary levels of post-secondary learners continue to proliferate. In light of the large number of vocabulary texts available for the college market as well as recent critical findings from research, the investigators undertook a study to determine the content of 55 college vocabulary texts and the extent to which the content was consistent with empirical evidence. Findings of the content analysis are detailed and recommendations for publication procedures are highlighted.
Though researchers since Terman (1918) have been examining the predictive relationship between a reader's word knowledge and ability to comprehend written discourse, it has just been within recent years that researchers have been able to experimentally verify that relationship (Beck, Perfetti, & McKeown, 1982; Kameenui, Carnine, & Freschi, 1982; S. Stahl, 1983). Yet, what is still poorly understood is how best to assess word knowledge or teach vocabulary acquisition strategies (Anderson & Freebody, 1981). Current research (e.g., Nagy, Herman, & Anderson, 1985; Mezynski, 1983; S. Stahl & Fairbanks, 1986) questions many traditional methods for teaching vocabulary and prevailing theories about the acquisition of word knowledge by students. Meanwhile, textbooks designed to build students’ vocabularies continue to proliferate. This is especially true of vocabulary texts for the college reading and study-skills market. In light of the growing number of vocabulary materials for college readers and new, critical findings from research on vocabulary, it seemed appropriate to determine the nature of the content in college vocabulary texts and the extent to which the content is consistent with empirical evidence. For this purpose, the researchers employed content analysis.
Content Analysis Research

A content analysis is an informal, systematic scrutiny of a given piece or component of instructional material to determine its quantitative and qualitative characteristics (Borg & Gall, 1983). According to North, Holsti, Zarkinovich, and Zinnes (1963), content analysis research involves: (a) reading documents and coding information into categories whereupon counts in frequency can be made, and (b) interpreting the findings in light of appropriate theory and research. Benefits of content analyses can be reaped by publishers, text developers, and researchers interested in improving instructional materials, as well as by practitioners and curriculum supervisors charged with the task of selecting and adopting new classroom texts and workbooks.

In recent years, nearly all content analysis-type research has been applied to texts, instructional manuals, or workbooks designed for various facets of primary or middle school reading instruction (cf. Beck, McKeown, McCaslin, & Burkes, 1979; Durkin, 1981; Hynd & Carter, 1983; Willow, Borwick, & Hayuren, 1981). However, little content analysis research on materials for college reading and study-skills instruction has been reported, in spite of the increasing volume of materials and the continually expanding college reading market. An extensive search of the literature led to the discovery of only seven previous content analyses of college reading and study-skills
Developing College  

5  

texts, none of which were concerned with vocabulary texts (Bahe, 1970; Browning, 1976; Ironside, 1963; Laycock & Russell, 1941; Miller, 1957; Radencich & Schumm, 1984; Utsey, 1968). Taken together, these researchers came to the following conclusions: (a) a consensus across texts as to what constituted effective study methods did not exist; (b) research foundations for most of the advocated techniques were missing; (c) adequate instruction and practice for given skills or subskills were limited at best; (d) a questionable transfer value of many practice activities to actual reading and study tasks was observed; and, (e) reliance on anecdote, opinion, and intuition instead of statistical evidence was the norm.  

An area of instruction for the college market that has thus far been ignored in previous content analysis research is vocabulary development. The need for research of this kind has never seemed greater when one considers how extensively commercial vocabulary materials are used. In one state alone, for instance, nearly all of the college and university skills programs utilized vocabulary texts in their reading study-skills offerings (N. Stahl & Brozo, 1984).  

The study we describe in this paper involved a content analysis of 55 vocabulary texts available to the college reading specialist. In particular, we were interested in determining the type of instruction employed by the texts to teach word knowledge and whether these instructional techniques were of an additive
or generative nature. Additive or word specific approaches to vocabulary instruction emphasize the learning of a pre-determined set of words. Generative approaches, on the other hand, emphasize vocabulary learning strategies which permit students to increase or generate vocabulary levels beyond the specific instructional materials. S. Stahl (1983, 1985) and S. Stahl and Fairbanks (1986) have pointed out the importance of making the distinction between vocabulary methods that emphasize word lists and those that teach strategies for independently expanding word knowledge. They conclude from their research that generative vocabulary strategies when appropriately taught are superior to additive approaches in promoting transfer of word knowledge and improving students' understanding of text.

**METHOD**

**Materials**

Initially, a total of 78 vocabulary books were identified in *Paper-bound Books in Print* (Fall, 1982) and *Subject Guide to Books in Print* (1982). Later, duplicates and texts more germane to the teaching of English as a second language or adult basic reading were excluded from consideration, yielding a total of 50 books. Although some of the books were copyrighted as long as 30 years ago, all texts under review were currently available for use with college reading students. An additional set of five newly-issued texts were incorporated during the conduct
Developing College of the study, thus bringing the total to 55 vocabulary texts.

Coding Procedure

In developing the coding instrument for this content analysis, the researchers followed general guidelines found in several major texts on content analysis research (Berelson, 1952; Holsti, 1969; Krippendorff, 1980; Pool, 1959). The researchers established a broad category, Instructional Category, and then carefully analyzed 10 vocabulary texts to determine which informational or organizational units of the texts might identify or serve as subcategories. For instance, nearly all of the texts included chapters or even sections on the importance of mastering word elements (i.e., prefixes, suffixes, and roots). Consequently, word elements was selected as one of the 13 subcategories for instructional categories. Whenever feasible, the researchers used accepted definitions drawn from sources such as A Dictionary of Reading and Related Terms (Harris & Hodges, 1981) for defining the specific titles of each of the identified subcategories.

In the first step of the analysis, each of the 55 vocabulary texts was reviewed with the purpose of identifying and coding the units of content which corresponded to one of the subcategory definitions. In the second step of the analysis, we further categorized the exercises of each instructional category as either generative or additive.
The following operational definition, based upon research by Graves and Hammond (1979) and theory from Anderson and Freebody (1981), was formulated to characterize instructional exercises as generative:

1. Word element exercises in which students are asked to use their knowledge of prefixes, suffixes, or roots to determine the meaning of difficult or unknown words. Students might also be asked to write the correct definition in their own words, write an original sentence to demonstrate their understanding of the targeted word, or answer questions about the word.

2. Dictionary practice exercises in which students are asked to look up the meaning of a word they do not understand that was found in context and then: (a) write the appropriate definition, and/or (b) use the word in their own sentence, and/or (c) answer questions about the word.

3. Contextual clue exercises in which students are asked to determine and then produce the meaning of an unknown word that appears in an extended section of actual text. Students then might be asked to: (a) circle clue words for the meaning of the target word found across sentences and paragraphs, and/or (b) write the definition of the word, and/or (c) write another sentence using the word, and/or (d) answer questions about the word.

The following operational definition was used to characterize instructional exercises as additive:
1. Word lists accompanied by multiple choice or matching items.

2. Synonym/antonym exercises in which students write or select appropriate definitions from a list of alternatives.

3. Related words, content field words, descriptive words, foreign words, figures of speech, confused/misused words, and proper nouns in which students select appropriate meanings in matching and/or multiple choice tasks.

4. Pronunciation exercises in which students match words with their appropriate diacritical marks.

5. Word element exercises in which students write the definition of prefixes, suffixes, or roots presented in isolation, and/or write the definition of words they already know that contain specific word elements, and/or choose from alternatives the correct definition of a word containing a targeted prefix, suffix, or root.

6. Context clue exercises with words defined previous to the exercise so the context is redundant, and/or words in single sentence contexts in which students choose the definition for a targeted word from a list of alternatives.

7. Dictionary practice exercises in which students answer questions unrelated to a word's meaning (e.g., how many syllables in a given word), and/or look up lists of words that they may or may not already know.

The textbooks which contained some generative and some
Developing College

additive exercises and instructional units were classified as "mixed."

Two of the researchers independently categorized exercises, instructional units, and entire textbooks utilizing the above criteria. Upon completing the 55 analyses, each book was once again reviewed to determine whether any content units had been overlooked. At the same time, a third researcher completed several analyses of randomly selected texts previously reviewed by the other two researchers. The researchers were concerned that agreement on definitions of subcategories and approaches might not have carried over the many months' duration of the investigation. However, in comparing the analyses from the three researchers and the results of the second review of the texts, judgements were similar 94% of the time. The few disagreements were reconciled through discussion.

While the results of these analyses are based on judgments and thus are somewhat subjective, Berelson (1952) pointed out that in investigations where there is high agreement on the definitions of the relevant categories, there will be little difficulty achieving validity in content analysis data.

RESULTS AND DISCUSSION

The content analysis of the exercises for each instructional category revealed that additive approaches predominate. Of the 55 textbooks, 45 had an overall additive philosophy, three had a
generative philosophy and seven possessed a combination of additive and generative approaches. Even the three vocabulary approaches that would appear to have the greatest generative potential (word elements, context clues, and dictionary use) were treated by most of the textbook authors as additive (see Table 1). In this next section the results of the content analysis for word elements, contextual analysis, and dictionary/reference use will be discussed further.

Word elements or affixes. In the books analyzed, the use of word elements was the most prevalent instructional category (44 texts, 80%). The popularity of teaching word elements has been corroborated by N. Stahl and Brozo's (1984) survey of 97 post-secondary institutions in Georgia. It would appear, then, that the teaching of word elements is a college reading tradition. Oddly enough, there is little empirical research, at any age level, to support the teaching of word elements as a method for vocabulary development (Graves & Hammond, 1979; Jenkins & Dixon, 1983).

As indicated in Table 1, 34 out of the 44 vocabulary textbooks contained word elements exercises that were additive in their approach (see operational definitions). These exercises emphasized isolated drills focusing on short-term memorization of...
Developing College

12

definitions for targeted words containing prefixes, suffixes, or roots. Only 10 of the textbooks sought to capitalize upon the generative potential of word elements. These few texts provided the students with guided instruction on how to apply and transfer their knowledge of word elements to everyday, naturally occurring reading situations.

In addition to the recurrent sentence completion and matching exercises found among the 55 texts, there were other exercise formats pertaining to word elements that seemed to have little relevance to determining a word's meaning. For example, students were asked to draw a line between a prefix and the other elements of a word (e.g., bicep, akin). Under the guise of using prefixes to unlock the meanings of difficult words, other exercises asked students to use their dictionaries to determine which words had prefixes and which represented some other kind of formation. Notice that in this type of an exercise the student is not asked to locate or master the word's definition. Other textbook authors asked students to practice their knowledge of prefixes on commonly known words such as "bicycle" and "triangle" instead of providing practice for applying knowledge of prefixes to derive the meanings of new words.

Writers of vocabulary textbooks might provide more effective instruction in using word elements to build word knowledge by incorporating some of the intensive transfer lessons advocated by Graves and Hammond (1979) into their instructional paradigms.
These lessons are teacher-directed, carefully sequenced, and inductive requiring students to: (a) determine the meaning of words containing a prefix, (b) identify a prefix and its meaning, (c) note how the meaning of a prefix contributes to the meaning of the targeted word, and (d) discuss sentences which include new words containing the previously presented prefixes and then define these new target words. Rather than evaluating the effectiveness of this instruction by asking students to define a list of pre-taught words, as did most of the textbooks in our analysis, Graves and Hammond devised a test to measure the generative potential of word elements and the effectiveness of their instruction. Students were asked to define difficult unknown words which had not been pre-taught but contained the targeted prefixes.

The information gleaned from this aspect of the content analysis suggests that college reading specialists who use commercial vocabulary materials will need to develop, teach, and evaluate their own transfer lessons if students are to benefit from the generative potential of learning word elements as a strategy for promoting vocabulary growth.

Contextual analysis. Of the 55 texts analyzed, 21 (38%) included contextual analysis as a vocabulary strategy. While contextual analysis is another potential generative vocabulary strategy, only six textbooks that included instruction in context clues could be categorized as generative. In the other books
virtually no provisions were made to help students transfer their understanding of contextual analysis from the exercises to the students' own reading material. Instead of asking students to identify clues in sentences or clues across sentences and paragraphs and then to derive the meaning of new and difficult words based on these clues, students were asked to determine the meaning of a word by selecting from alternatives, as typified by the following example:

The gist or heart of the lawyer's defense was that his client could not have murdered his wife because he was locked inside a closet at the time.

a) core  c) verdict  
b) conclusion  d) reason

Furthermore, the related examples and practice activities designed to promote word knowledge from context were presented in highly contrived and artificial sentences so that the reader would receive ample clues to discover the meaning of a given word, as in the example below:

A paragraph should be concise and direct rather than wordy and roundabout.

Both examples demonstrate that such an instructional approach leaves the student with the false assumption that "real" text is equally generous in providing clues to the meaning of unknown words.

The few exercises that were generative in nature typically
employed extended pieces of prose drawn from literature and content-area textbooks. These exercises also required students to define the meaning of the words on their own, often asking them to defend their decisions by providing clues from the passage. A few exercises required students to write a sentence for each word that they had learned from contextual analysis as a means of further checking their understanding. In only one vocabulary book, however, were students instructed to use their own textbooks and other reading material to locate unknown words and to use the naturally occurring context clues to determine word meanings. Thus, college reading specialists should not assume that content pertaining to contextual analysis in college vocabulary textbooks will provide appropriate generative instruction (Baldwin & Schatz, 1985).

Vocabulary instruction should be designed in such a way as to provide students with multiple exposures of a word in multiple contexts (Nagy, Herman, & Anderson, 1985). For instance, students could read extended prose passages from several psychology textbooks that discuss the concept "confabulation" then generate a comprehensive definition. In another approach, students could read about the word "depression" from relevant passages in geology, psychology, and economics. Afterward, they could be given a topic and asked to develop an essay in which the word is used accurately in context. Finally, authors of vocabulary materials should present the
difficulties of using context to discover the meanings of many words, especially content vocabulary, in an honest manner. Instead of filling their books with exercises that drill students in the identification of various types of context clues—a highly questionable approach in light of findings by Baldwin and Schatz (1985)—authors of vocabulary books should discuss the realistic limitations of using contextual analysis to unlock meanings of low-frequency, technical vocabulary found in college textbooks.

Dictionary/reference use. Among the commercial materials, dictionary/reference use was a very common instructional approach for vocabulary development. But while 24 texts (44%) covered the dictionary as a reference for discovering word meanings, only three textbooks promoted this strategy in a manner that could be classified as generative. The directions to the two exercises below typify these generative activities:

(a) Use a textbook from another course and find five words you need to learn. List the words below, copy the sentence in which you found each word, and credit the source. Then look up each word in the dictionary. Explain its meaning according to the way the word is used in the sentence.
(b) Read the paragraphs below. Then explain the meaning of each of the words that is listed after each set of paragraphs. If you already know the meaning of the word or
can tell its meaning from the sentence of passage, explain the word without using the dictionary. If you do not know the meaning of the word, look it up and fill in the information located below.

Unfortunately, most vocabulary textbook authors chose to emphasize non-meaning oriented activities such as requiring students to interpret diacritical markings, circle silent consonants, or give plurals of nouns. The directions below and the activity it introduces are in direct contrast to the meaning-oriented directions and exercises previously cited:

Copy from the dictionary the syllabication of the following words.

(a long list of words is presented)

The above example represents the kind of exercises college students have grown quite use to--worksheet activities. These questionable exercises might be easily replaced by more relevant and useful tasks that require students to select the most appropriate dictionary definition for a specific context, or to compare and contrast different dictionary entries, or to utilize the thesaurus. Interestingly enough, only seven of the 55 textbooks contained any information on the thesaurus, indeed a very important reference for college students.

Though the research (see S. Stahl & Fairbanks, 1986) would
support a student possessing both the definitional and contextual understanding of a word, this content analysis revealed that the commercial vocabulary texts relied heavily upon exercises that developed only simple definitional word knowledge. This is not to suggest that vocabulary textbook writers should not present and college reading specialists should not teach the dictionary as a reference. Rather, we would argue for a better balance between the dimensions of word knowledge as reflected in the types of activities designed to increase a student's vocabulary understanding.

In summary, the researchers determined that for most of the vocabulary texts analyzed, the generative potential of the three strategies discussed above was lost to irrelevant or invalid exercises. Instead, instructional content should have been devoted to exercises that directed students to transfer their knowledge of word elements, contextual clues, and dictionary/reference use to their own reading materials.

Additive Vocabulary Approaches

The researchers were struck by the preponderance of additive approaches to teaching word knowledge found among the analyzed vocabulary books (see Table 1). By far the most common additive-type exercises involved learning words from lists. In fact, a full 22% (12 books) taught words exclusively from lists followed by quizzes. When textbook authors and college instructors determine that a specific set of words should be
taught to a group of students, they have made several \textit{a priori} assumptions about the vocabulary instructional process. First, they assume that the chosen words have a high enough frequency that students mastering the definitions will perform better in subsequent reading. However, such a master list of words has yet to be developed and validated for instructional use at the postsecondary level. A more questionable assumption is that words taught in isolation or from a list possess both generic and static meanings, regardless of the context in which they appear. Yet research findings would suggest that the memorization of a definition is not equivalent to full concept knowledge (Dixon & Jenkins, 1984) which enables students to understand how the concept a word represents changes in different contexts (S. Stahl, 1985).

With rare exception, the exercises that accompanied the word lists were memory-oriented, multiple-choice, matching, or completion tasks. Rarely were students asked to demonstrate their understanding of the words from lists on transfer tasks such as writing a sentence of their own in which the word is used correctly.

Neither the assumptions underlying the teaching of vocabulary from word lists nor the research which has investigated its impact upon student learning, particularly at the postsecondary level, has been encouraging. Though it should be noted that while additive vocabulary strategies are not
inherently detrimental, they should comprise only one small part of an effective and comprehensive vocabulary program (Kameenui, Dixon, & Carnine, in press).

RECOMMENDATIONS

Enough information can be gleaned from this content analysis to warrant several recommendations for vocabulary development at the postsecondary level.

1. **Materials should encourage students to independently develop their vocabularies.** Regardless of whether the materials used with students are additive or generative, they should encourage and support the life-long habit of vocabulary acquisition. Students, especially remedial or developmental readers, must realize that there is no quick fix for a deficient vocabulary. Yet, when college students are encouraged to select their own words of study, they not only can make significant gains on standardized measures (Gnewuch, 1973), but they also can increase their interest in vocabulary acquisition (Haggard, 1984). Hence, a case for independent and long-term vocabulary development needs to be stated not only in the preface of every text, but in every chapter as well. In addition to rhetoric exhorting the students to independently expand word knowledge, texts should also provide specific practical methods for students to collect and organize their own words.

   Based on the content analysis it would seem that only a few
authors considered self-development of word knowledge a worthy
topic. In fact, only two authors suggested that students
maintain a vocabulary notebook, while another nine recommended
the collection of word cards similar to the Frontier System of
to the Frontier System of
vocabulary development (Pauk, 1974). In another four vocabulary
books, the readers were asked to find and to list on cards 10
words they wished to master from their own college textbooks. In
spite of these few attempts to develop independence in expanding
vocabularies, most authors of vocabulary texts preferred
traditional workbook-type activities that can be completed and
corrected easily by many students at once. Until authors realize
the importance of incorporating strategies that would encourage
and reward students for learning words that are meaningful to
them, college reading specialists should consider employing such

2. **Materials should stimulate students' deeper levels of understanding about each word of study.** In most of the 55
analyzed books, students demonstrated their understanding of
words by matching or choosing definitions. Dixon and Jenkins
(1984) believe that when learners pair word labels to
definitions, they are demonstrating a verbal association level of
vocabulary knowledge which, at best, will produce a negligible
impact on subsequent reading comprehension. Hence, authors and
teachers should provide exercises that stimulate the generation
of novel contexts or definitions for the words under study (S.
Developing College

Stahl, 1983). These exercises should ask students to: (a) put definitions in their own words, (b) write original sentences, (c) create categories for words in lists, and (d) answer thought-provoking questions about the targeted words. For example, Licklider (1981) in *Building a College Vocabulary* posed the following questions about words previously defined:

(a) Why would we say that the United Nations is a multinational organization?

(b) Why are the earth's air, land, and water sometimes given the single name of biosphere?

Unfortunately, this exercise format was practically nonexistent among the analyzed vocabulary texts. Until textbook authors move beyond the practice of promoting mere verbal associations in predictable and easy-to-correct formats, college reading specialists will need to develop exercises to move students to deeper levels of word knowledge.

3. Materials should teach contextual analysis with actual texts. While over one third of the 55 textbooks devoted some space to contextual analysis, less than 10% of those used extended discourse from actual texts as the practice materials. The following example is all too typical of the artificially-contrived practice sentences found in the vocabulary materials:

Under questioning, Lee broke down and confessed the murder.

This sentence is obviously contextually rich; yet it is also
highly artificial. Students grappling with contextual analysis as a vocabulary strategy would reap greater benefit if authors would select actual passages from college-level reading materials for practice. Then students would learn to cope with contexts, to lean on clues and to read across sentences and paragraphs to piece together meanings of words. Texts such as Licklider (1981), DeVitis and Warner (1966), and Zuckerman (1980) come as close as any of the the vocabulary books to meeting this recommendation since these texts include paragraphs and extended citations from literature and college-level content-area textbooks. Unfortunately, only the Licklider text is still in print.

4. Materials which emphasize the mastery list or additive approach to vocabulary development should organize words in semantically-related sets. Most of the 55 vocabulary books provided students a list of the targeted words at the beginning of each chapter. Students were then expected to learn these long lists of words by the end of the chapter. Of course, the research for such an approach to college-level vocabulary development, especially on the long-term basis (Fairbanks, 1977), is not very promising. Some textbooks, however, introduced the new words to the students via a content or a semantic set, much like the research studies conducted by Beck and her colleagues (e.g. Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983) which have achieved very favorable results. In
Gordon's (1985) text, for instance, the master list of words was organized around excerpts from history, psychology, philosophy, and literature textbooks as well as from newspapers. Others like Roloff, Brosseit, and Carrick (1981) introduced the targeted words around topics such as "words about work," "words about action," "words about ideas," "words about people," and "words about feelings." If authors feel compelled to emphasize the additive approach to vocabulary acquisition, they should consider employing a unifying context which will assist students in remembering both the definitional and contextual aspects of each targeted word. Such an approach should also assist students in moving beyond the verbal association level of word knowledge.

5. **Materials should incorporate mnemonic devices and rehearsal guidelines to promote long-term vocabulary learning.** Only five textbooks offered discussions about and practice with mnemonic devices or rehearsal guidelines. This finding is especially surprising considering the respected history of the keyword research (Pressley, Levine, & Miller, 1981, 1982) emphasizing visual imagery as a means for remembering a word's definition, or the time-honored learning principles of self-recitation and distributed practice (Gates, 1917; Peterson, 1944; Spitzer, 1939). Maker and Lenier (1982) and Lenier and Maker (1982) did include in both their texts an entire chapter on the importance of word memory techniques such as word association, visual association, rhyming, and cumulative review.
In the future, other textbook authors and college reading professionals should seriously consider including such word memory techniques as an integral part of the vocabulary curriculum.

6. **Textbook authors should carefully scrutinize the validity of each exercise format.** Many exercises which purport to teach or reinforce a certain skill do not, in fact, do so. An example will illustrate this point. A very common exercise format presented a list of words along with their definitions at the beginning of a chapter. Then, under the pretext of practicing contextual analysis, the students are given a sentence with an underlined word (one of the words previously defined at the beginning of the chapter); next, they are asked to define the word or select the best definition of the word from four alternatives. Instead of practicing contextual analysis, the exercise requires simple recall and matching. This trend was found in almost every textbook across all the instructional categories. In fact, most of the strategies with generative potential (i.e., word elements, contextual analysis, and dictionary/reference use) were not classified as generative by the researchers because of the invalid reinforcement exercises. Authors need to carefully construct exercises that reinforce the skills being taught, and college reading specialists need to be concerned by the fact that when their students successfully complete an exercise, they may not have mastered a vocabulary
Developing College

strategy at all. Instead, they may have only mastered an exercise format.

CONCLUSION

While the essence of any content analysis rests inherently in the present (i.e., the population of texts currently on the market), the value of any content analysis research is for the design and publication of quality material, in this case, for future generations of postsecondary learners. In order to accomplish such a lofty goal, we propose a model of institutional material development in which researchers, authors, reviewers, editors, and classroom instructors cooperatively interact. In brief, researchers in vocabulary acquisition have the duty to disseminate their findings as widely and cogently as possible. It is the responsibility of authors then to understand and utilize valid research findings that are applicable to the population of learners who will use the text. The reviewer must act as the quality control agent in the process of developing new materials. In this case, the reviewer must insist that materials are based upon the characteristics of effective vocabulary instruction rather than tradition-based approaches. Not to be forgotten, the editor has the ultimate responsibility of producing a quality vocabulary program based on solid research findings, as opposed to the factors of marketability. Instructors form the final component of the development model, as
they are the ultimate evaluators in their role as daily consumers. They have the responsibility of providing on-going feedback on the materials' effectiveness to the publisher, who in turn should pass this information on to the other members of the team. With such cooperative teamwork, postsecondary vocabulary materials would be more likely to reflect research-based vocabulary instruction. Unfortunately, this is not the case in 1986.
References


## TABLE ONE

Instructional Approaches in Postsecondary Vocabulary Texts

<table>
<thead>
<tr>
<th>Functional Category</th>
<th>Number &amp; Percentage of Texts Offering Instruction (N=55)</th>
<th>Number &amp; Percentage of Texts Featuring Additive Approaches</th>
<th>Number &amp; Percentage of Texts Featuring Generative Approaches</th>
<th>Number &amp; Percentage of Texts Featuring Mixed Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elements (G)</td>
<td>44 (80%)</td>
<td>34 (77%)</td>
<td>4 (09%)</td>
<td>6 (14%)</td>
</tr>
<tr>
<td>PRIMARY/REFERENCE (G)</td>
<td>24 (44%)</td>
<td>16 (67%)</td>
<td>3 (12%)</td>
<td>5 (21%)</td>
</tr>
<tr>
<td>En Clues (G)</td>
<td>21 (38%)</td>
<td>12 (57%)</td>
<td>6 (29%)</td>
<td>3 (14%)</td>
</tr>
<tr>
<td>Association (A)</td>
<td>20 (36%)</td>
<td>20 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Word/Misused Words (A)</td>
<td>18 (33%)</td>
<td>18 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sub Words (A)</td>
<td>17 (31%)</td>
<td>17 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Technical Contexts (A)</td>
<td>17 (31%)</td>
<td>17 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Synonyms (A)</td>
<td>16 (29%)</td>
<td>16 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Repetitive Words (A)</td>
<td>15 (27%)</td>
<td>15 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Letters of Speech (A)</td>
<td>15 (27%)</td>
<td>15 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sub Field (A)</td>
<td>13 (24%)</td>
<td>13 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nouns (A)</td>
<td>11 (20%)</td>
<td>11 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Antonym (A)</td>
<td>11 (20%)</td>
<td>11 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>38 (69%)</td>
<td>36 (95%)</td>
<td>0</td>
<td>2 (05%)</td>
</tr>
</tbody>
</table>

Percentage totals in columns 3, 4, and 5 are based on the total number of books offering a particular instructional category.
APPENDIX
The 55 vocabulary books which were considered in this content analysis are listed below. Each entry includes standard bibliographic information such as author, publication date, title, publisher, and publication site. Also included are the number of pages and, whenever possible to determine, the number of words or word elements in the text. Each book is classified as a workbook (w), textbook (te), popular press/trade book (pp), or programmed instruction (pi).


Funk, W., & Lewis, N. (1971). *30 days to a more powerful vocabulary* (pp). New York: Pocket Books, 244 pp. (244 words).


# VOCABULARY TEXT ASSESSMENT

Title of text: 

Author: 

Text Format: Workbook: 

Publisher: 

Programmed Instruction 

Date: 

Popular Press: 

Cost: 

Text with Exercises: 

Pages: 

Instructor's Manual: 

Comment: 

---

# Words in Text: 

# Words Per Chapter: 

# Word Elements: 

# Word Elements per Chapter: 

Assessment Procedure: Diagnostic Pretest: 

PrePost: 

Final Test: 

Section Tests: 

Chapter Tests: 

Other: 

Instructional Categories: 

Related Words: 

Content Field: 

Descriptive Words: 

Word Elements: 

Figures of Speech: 

Confused or Misused Words: 

Historical Contexts: 

Foreign Words: 

Proper Nouns: 

Dictionary/References: 

Pronunciation: 

Words in Context: 

Synonym Antonym: 

Other: 

Instructional Activities: Matching: 

Sentence Fill-ins: 

Word Puzzles: 

Word Element Fill-ins: 

Synonym Antonym: 

True-False: 

Multiple Choice: 

Words in Context: 

Definitions: 

Word Elements: 

Word Scramble: 

Analogies: 

Parts of Speech: 

Sentence Usage: 

Other: 

Other: 

Grade Level of Sample Words: 

Familiarity Score of Sample Words: 

Comments: 

---
CONTENT ANALYSIS OF VOCABULARY TEXTBOOKS

1. Which type of word information is emphasized during instruction?
   ___ definitional information
   ___ both definitional and contextual information with more stress on the latter

2. How are the words presented to the students?
   ___ word level
   ___ sentence level
   ___ whole text level

3. How does the instruction use the prior knowledge of the students?

4. What levels of processing are students asked to perform as they participate in the instruction?
   ___ memorization or association
   ___ generation
   Give an example:

5. In what setting does the instruction take place?
   ___ individualized or self-paced
   ___ mixed settings with student-teacher and student-student interactions

6. How many encounters does a student have with a word in different contexts?
   How many reviews are provided?
   ___ one before the test
   ___ cumulative review throughout the text

7. How is vocabulary acquisition or knowledge measured?

8. What vocabulary strategies are included? List them.

9. Is the text predominantly additive or generative? Explain why.

10. Which philosophy (aptitude, access, instrumental, knowledge) does the text adhere to?

11. Rate this text as to its usefulness with college students:

   Excellent
   Average
   Forget it
<table>
<thead>
<tr>
<th>Report No.</th>
<th>Title</th>
<th>Authors</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>84-03</td>
<td>Using a Learning Model to Integrate Study Skills into a Peer-Tutoring Program.</td>
<td>Schmelzer, R.V., Brozo, W.G., &amp; Stahl, N.A.</td>
<td>(ERIC No. ED 256-244)</td>
</tr>
<tr>
<td>84-06</td>
<td>Vocabulary Instruction in Georgia's Post-Secondary Reading Programs.</td>
<td>Stahl, N.A., &amp; Brozo, W.G.</td>
<td>(ERIC No. ED 248-759)</td>
</tr>
<tr>
<td>84-08</td>
<td>Faculty Perceptions of Student Behaviors: A Comparison of Two Universities.</td>
<td>Brozo, W.G., &amp; Schmelzer, R.V.</td>
<td>(Not Submitted to ERIC—See the Journal of College Student Personnel, Vol 26, #3)</td>
</tr>
<tr>
<td>84-10</td>
<td>Are Drivers' Manuals Right for Reluctant Readers?</td>
<td>Stahl, N.A., Henk, W.A., &amp; King, J.R.</td>
<td>(ERIC No. ED 245-208)</td>
</tr>
<tr>
<td>85-02</td>
<td>Do Pictures Make a Difference in College Textbooks?</td>
<td>Smith, B.D., &amp; Elifson, J.M.</td>
<td>(ERIC No. ED 256-246)</td>
</tr>
<tr>
<td>No.</td>
<td>Title</td>
<td>Authors</td>
<td>Notes</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>86-03</td>
<td>Literature: The Key to Lively Content Courses.</td>
<td>Brozo, W.G., &amp; Tomlinson, C.M.</td>
<td>(ERIC No. 271-720)</td>
</tr>
<tr>
<td>86-06</td>
<td>Personality Type and College Reading Comprehension.</td>
<td>Singer, M., &amp; Etter-Lewis, G.</td>
<td>(ERIC Document Reproduction pending)</td>
</tr>
</tbody>
</table>