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ABSTRACT

This paper discusses research findings regarding vocabulary instruction and reading comprehension and suggests methods to develop vocabulary using visual aids. As indicated by the research, vocabulary instruction is necessary and can lead to improved comprehension; there also appears to be a strong need to relate concrete visual experiences to vocabulary development, providing active, meaningful, and repeated word use. Visual methods for developing vocabulary that involve students actively taking part in their reading vocabulary development include using: interactive video; student illustration of vocabulary; computer software packages designed to develop reading skills; activities that involve visual perception; and graphic organizers, including story maps, collaborative rehearsal of new vocabulary, and student-made flash cards. The use of visuals, combined with cooperative learning groups, provides an effective environment for the development of vocabulary and reading comprehension. (Contains 14 references.) (AEF)

Using Visuals To Develop Reading Vocabulary

by Marilyn J. Bazeli
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Introduction

For decades, reading professionals have been plagued by questions about the basic processes of reading and their underlying components. Vocabulary development has been found to be an integral element in the development of reading comprehension.

However, teachers have sometimes felt discouraged when their students seem to lack interest in reading instruction. Television, computers, and other visual distractions have often been blamed for that. When used creatively, however, those visuals can become valuable tools to help students learn to read, and also to increase their motivation to read.

A discussion of some research findings regarding vocabulary instruction and reading comprehension will be presented. Based on those findings, some methods to develop vocabulary will be suggested, centering around the visuals that are present and important in children's worlds today. Developing vocabulary through visuals can be just the motivation needed to involve students enthusiastically in reading.

Vocabulary Instruction and Reading Comprehension

Vocabulary development has been an important concern to some researchers. They have found that knowledge of word meanings has a strong relationship to reading comprehension. Some hypotheses regarding the relationship between vocabulary and reading comprehension imply that vocabulary instruction will directly improve comprehension, and that experience or first-hand knowledge of a concept is directly related to comprehension (Anderson & Freebody, 1981).

A review by Mezynski (1983) identified the following factors as related to

successful vocabulary instructional methods for improving comprehension: a) the amount of practice given in learning the new words, b) the breadth of training in the use of the words, and c) the degree to which active processing is encouraged.

Stahl and Fairbanks (1986) conducted a meta-analysis of studies that reported the effects of vocabulary instruction on the learning of word meanings and on comprehension. Their meta-analysis looked at the methods' effectiveness by describing the effects of three method-specific factors on vocabulary instruction. These were: a) whether a method gives the student examples of each to-be-learned word in context, b) the types of activities that are required to learn the word, and c) the number and type of exposures to information about each word. Stahl and Fairbanks' model-based meta-analysis concluded that vocabulary instruction does appear to have a significant effect on the comprehension of passages containing words taught. However, this significant effect of vocabulary instruction on reading comprehension was not found with all teaching methods. Methods that provide only definitional information about each to-be-learned word did not produce a reliable effect on comprehension, nor did methods that gave only one or two exposures of meaningful information about each word. However, their meta-analysis revealed that the mixed methods, both of definitional and contextual information about each to-be-learned word, produced the highest effects on comprehension. The breadth of knowledge about each to-be-learned word was found to have strong impact on readng comprehension. Time allocation correlations were fairly strong for passage comprehension measures, which may mean that words need to be learned thoroughly for passage comprehension. Further, Stahl and Fairbanks point out that vocabulary instruction has stronger effects on inferential comprehension versus literal comprehension.

Carr and Wixson (1986) developed four guidelines for evaluating vocabulary instruction and specific procedures used for vocabulary instruction. These were: 1) Instruction should help students relate new vocabulary to their background knowledge, 2) Instruction should help students develop elaborate word knowledge, 3) Instruction should provide for active student involvement in learning new vocabulary, and, 4) Instruction should develop students' strategies for acquiring new vocabulary independently.

A summary of research would suggest that teachers should provide well-developed vocabulary lessons, including multiple opportunities to interact with words in a meaningful context (Koskinen, Wilson, Gambrell, & Newman, 1993). Classroom teachers need to be attuned to the latest in technological advances to make the best use of available resources for vocabulary instruction. Our world is becoming more and more visual, with visual communication becoming more dominant than print communication. Teachers need to relate written and visual learning.

Recent research in the area of cognitive theory has found that people store information that they receive via experience. This information, received through the senses, is stored in the form of schema which is "an organized network of concepts embodying some aspect of knowledge" (Durkin, 1989, p. 441). Roboch (1994) believes that, because of the large amount of information and images that children today receive, many children "have trouble main-

taining schemata in order to develop the skills of reading and writing" (p. 3). The technique of visualization can aid the child to ground language in his/her own thought processes (Roboch, 1994). Roboch further states that there are two factors which can contribute to a child's inability to process language and vocabulary effectively: 1) some children do not have concrete experiences needed to give meaning to vocabulary, and 2) some children have information overload caused by too much abstract (spoken) language.

Thus, it appears in research that vocabulary instruction is necessary, and it can lead to improved comprehension. Also, there appears to be a strong need to relate concrete visual experiences to vocabulary development, providing active, meaningful, and repeated word use. Active involvement, concrete examples and attention to abstract concepts are a necessity.

Visual Methods for Developing Reading Vocabulary

Following are some practical visual methods for developing vocabulary. All of these methods involve students actively and concretely in their own reading vocabulary development.

Video

Some recent vocabulary instruction methods involve reading from captioned video through the television screen (Koskinen, Wilson, Gambrell, & Neuman, 1993). They have found that students want to watch captioned television, feel confident processing information from a familiar medium, and seem to attend to the semantically rich and multisensory context.

An extension of utilizing prepared captioned television would be for students to produce their own videos, with captioned vocabulary words and pictures or live action to illustrate the vocabulary. A short story could be presented, using either pictures or a live play format with students acting out the parts, and printed vocabulary words interjected at appropriate points of the story. Only a few words would be presented, and would be repeated for increased retention.

Another example of using video to develop specific vocabulary would be to use student-created stories, which would be read (or acted out) in front of a video camera. Specific vocabulary words would be stressed orally, and a card with the printed word held in front of the camera would focus the viewers' attention on the written form of the word. This activity would provide a rich basis for using the vocabulary words in a real-life and meaningful situation.

The video productions described above could be saved and used with future classes or for review. Thus, eventually, a library of specific vocabulary videos could be assembled, with great motivational impact because of the student production.

Drawing

Using art as a tool for improving reading is not a new idea. However, Roboch (1994) states that, "by coupling the abstract sound/symbol (in the form of written work) to the student's drawing, the appropriate connection is made between the word and its meaning" (p. 3). Drawing in connection with vocabulary provides children with the means to think in the language by which

they receive much of their information, that being the visual language.

That concept can be applied in various ways. Students could simply illustrate specific assigned vocabulary words (one or two per student), which would then be assembled and collectively would represent all of the vocabulary specific to a particular story.

Students could be asked to illustrate words from a story they read by themselves, or to illustrate a passage of the story. This is an excellent way for students to engage visually with the story, and for teachers to evaluate the understanding of the students regarding vocabulary words on their comprehension of a passage (Neu & Stewig, 1991). The visual retelling of a story is a wonderful way to vary the informal assessment of comprehension.

Computers

Currently, there are many computer programs which have been designed for the stated purpose of developing vocabulary and reading skills.

The Broderbund company has produced several software packages for the computer in the area of reading and whole language. Their Living Books, on CD-ROM, were developed with the aid of classroom teachers, reading specialists, and curriculum experts. While each of these CD-ROMs encourage reading and provide teacher materials for whole language experiences, the learner is also highly involved with visual images.

Discis Books, another CD-ROM series, is also a highly successful approach to reading. Students can interact with individual vocabulary words by having them pronounced for them (in several languages), or the entire text can be read to the students. Additionally, students can select specific items in the illustrations, and that item is named and defined.

Computer drawing programs can be utilized for vocabulary development also. Students can create a visual with the computer to illustrate a specific vocabulary word. The process of creating an accompanying visual provides practice with new vocabulary, and promotes encoding of that new vocabulary into long-term memory.

Visual Perception

Another effective strategy to develop vocabulary is utilizing the skill of visual perception. As students become involved in actively analyzing pictures or book illustrations, they are putting to use much of the vocabulary they need to develop.

Graeme Base's book Animalia provides an excellent array of visual representations of thousands of vocabulary words. On each page, a letter of the alphabet is presented, with an alliterative phrase. Depicted on each page are sometimes as many as a hundred objects that begin with that letter. Determining the name of each object in terms of the correct beginning letter is fun, challenging, and motivating. Young children to adults can be captivated by this activity. A variation of using the book itself to develop vocabulary is to have students create their own, with a selection of drawings illustrating vocabulary words beginning with the appropriate letter. The research involved in finding the name of an object, drawing it, and seeing if a classmate can figure it out can be a fun and effective vocabulary activity.

Another activity involving visual perception could be to present each student with a list of specific vocabulary words (perhaps some that are currently being focused on in a particular story). Each student would then select four or five words, create a visual of each that would be combined into one picture. Other students would employ visual perception skills to find the visual depiction of the vocabulary words within the complete drawing.

Goldstone (1989) has written about the need for visual literacy skills to aid "the scaffolding of images for the reader and help the reader to climb into the story." (p. 592). She believes that teachers should use the pictures in books to expand comprehension and promote vocabulary. She further believes that "being able to interpret visual images provides children with skills and the confidence to interpret the more symbolic form—the printed page." (p. 595). Thus, the use of visual perception skills in classroom activities can help students achieve effective reading skills.

Organizational Visuals

Graphic organizers of various types can be useful visual tools for the development of vocabulary. Using key vocabulary words as a structural basis for a mind-mapping activity regarding a particular story can not only enhance the recognition and meaning of the words, but also can enhance the comprehension of the entire story. A good graphic representation "can show at a glance the key parts of a whole and their relations, thereby allowing a holistic understanding that words alone cannot convey" (Jones, Pierce, & Hunter, 1989, p. 21). If those "key parts" are specified vocabulary words, students focus on those words and how they are an integral part of story.

Fitzpatrick (1994) advocates many critical thinking strategies to develop reading comprehension. One strategy she suggests in the use of story maps, to assist student in understanding how a story is organized. "Such maps can be created with words and pictures" (p.143). Thus, specific vocabulary words can be visually focused upon in such maps, not only aiding in vocabulary development but also in comprehending the story.

Word Sorts can be a powerful vocabulary development strategy within a comfortable group setting. "The process was identified by Gillet and Temple in 1982 as a way to help students consider a variety of word features by comparison and classification" (Olle, 1994, p.230). Word Sorts enable students to rehearse new vocabulary, to discuss various word classifications, and to develop convergent and divergent thinking through deducing the defining characteristics of words. As students work collaboratively to sort given vocabulary words into categories, they not only practice the pronunciation of the words, but also comprehend the meaning of the words. Further, Word Sorts involve the physical manipulation and hand-on experience that is missing from many other procedures for vocabulary instruction. Students are actively involved as they manually and visually sort, sometimes re-sort, and discuss the vocabulary words with group members (Olle, 1994).

Student-made flash cards, containing a vocabulary word and a picture can help in motivation and organizing learning. The typical flash cards with a printed word and definition are not very interesting to students in this visual world; however, flash cards with a graphic element added to represent or remind the student of the mean-

ing of the printed vocabulary word are much more interesting. When the students can use their own visual creativity to select a visual, the motivation is dramatically increased.

Conclusions and Recommendations

The purpose of this paper was to present background and methods for use in the classroom with the visuals that have become a part of everyone's world. Visuals have great impact on students' lives, and can be useful tools to develop vocabulary and reading comprehension skills. The ideas presented here are only a few of the many that could be utilized in the classroom.

Most of the ideas presented would involve cooperative learning groups. Cooperative learning groups have been found to motivate students, increase academic performance, encourage active learning, and, of particular importance for this paper, promote literacy and language skills. (Adams & Hamm, 1990). Thus, the use of visuals, combined with cooperative learning groups, provides an especially effective environment for the development of vocabulary and reading comprehension. Even more importantly, enthusiasm and motivation for reading is heightened within the students when they employ visuals present in their world combined with cooperative groups.

It is recommended that strategies be implemented in the classroom to involve students in the creation and/or perception of visuals in connection with reading instruction. Making reading instruction part of the visual world we live in can provide excitement and enthusiasm within the classroom on the part of the students as well as the teacher.

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