The Learning Cycle:  
A Powerful Approach to Content Area Vocabulary Instruction

By Brenda Spencer and Andrea M. Guillaume


Vocabulary knowledge is powerfully related to comprehension (Anderson & Freebody, 1981; Davis, 1944; National Institute of Child Health and Human Development, 2000). Students who have richer vocabularies not only understand more but they can use their knowledge to help them learn new information and the terms that represent that knowledge (Nagy & Scott, 2000).

Studies of how children acquire vocabulary indicate that it is a complex process. Nagy and Scott (2000) describe the following four aspects of the complexity of word knowledge:

1. **Word knowledge is incremental.** Children need to encounter words in different contexts over time.
2. **Words have multiple meanings.** The word *place*, for example, can mean the space occupied by a person or thing, a rank, or the position of a figure in a series of numbers.
3. **Word knowledge is multidimensional.** To know a word means knowing what it means, how it is related to other words, how to pronounce it, and how to use it in a sentence.
4. **Word knowledge is interrelated.** Words are not isolated units. The depth of knowledge that a
person has about a word is related to how much background knowledge the person has about the domain in which the word is used.

The content areas such as science, mathematics, and social studies have specialized vocabulary and provide a context in which students will have multiple exposures to words and concepts over time. In the content areas, new words and concepts are central to instruction, and thus students need to learn specific meanings, need to be able to understand the terms when they hear and read them, need to be able to use them correctly in both oral and written communication, and need to remember them over time (Blachowicz & Fisher, 2000).

One instructional model that powerfully integrates content area concept learning with vocabulary development is the learning cycle. Most versions of the learning cycle offer an inductive approach to instruction that embeds learning within real world or realistic contexts. One particularly useful version of the learning cycle has four phases: engage, explore, develop, and apply.

During the engage phase, students are presented with a real-world question or phenomenon that piques their interest. In terms of vocabulary development, the engage phase can be used to elicit language that students bring to the question or phenomenon. Because students can have startlingly different background experiences and word knowledge, eliciting students’ language can expose students to rich language from their peers. The engage phase can also be used to set the stage for developing both concepts and labels for target terms.

During the explore phase of the cycle, students participate in hands-on exploration directly related to the question(s) raised during the engage phase. The explore phase allows students to investigate the properties of relevant materials and to begin forming nascent ideas related to the concept under study. No explicit instruction on concepts is given during this phase. Vocabulary develop-
ment here focuses on developing concepts—not labels. Teachers can pay particular attention to students’ own labels for target terms.

During the *develop* phase, teacher and students build upon and systematize the knowledge gained during exploration. They review students’ efforts and reflect on the success and failure of their empirical tests, if any were conducted. They review the initial question, determine the extent of their ability to answer it, and they consider questions of emerging relevance. Teachers explicitly address misconceptions during this phase. It is during the *develop* phase that the teacher explicitly guides students to attach terms to new concepts and to formally structure and enhance concepts that began formation during the exploration phase. Because most of our word knowledge comes from reading (Anderson & Nagy, 1992), it is appropriate for teachers to include opportunities for students to read in the *develop* phase.

Finally, during the *apply* phase, students use their new knowledge in a different situation, typically a realistic one. This allows students to transfer their learning to new contexts and test its implications in other settings. During this phase, students can use new terms in readings or writings that take them into different contexts. This will allow multiple repetitions of the terms and allow them to use terms in novel (expressive) ways. Several types of writing activities can be used effectively to provide students with creative contexts for applying their knowledge. Figure 1 (On page 4) provides sample activities that can be used at each stage of the learning cycle to develop rich and powerful content area vocabulary.

In summary, the learning cycle offers a powerfully promising approach to embedding vocabulary instruction into the content areas. When teachers create an environment in which students are motivated to learn vocabulary and engage them in shared experiences that enhance their understanding of the terms they are learning, they help them build the skills they need to need to be successful learners.
Figure 1. Vocabulary Activities for Each Phase of the Learning Cycle

Engage

- Photos or artifacts (Discuss objects that that heighten curiosity about topic.)
- Student questions (List things that make students curious about the topic.)
- Graphic organizers such as pictorial maps, semantic maps, data retrieval charts, and Venn Diagrams (Record students’ initial ideas.)
- Cooperative learning strategies such as Think-Pair-Share (Lyman, 1988) (Elicit student ideas about the question or topic.)
- Word Banks (Make lists of student-generated terms related to question or topic.)
- Possible Sentences (Moore & Moore, 1986) (Predict word meanings by constructing possible sentences using them.)
- Predict-o-grams (Blachowicz, 1986) (Predict word meanings by placing terms in conceptually relevant categories.)
- Brainracing (Brown, Phillips & Stephens, 1993) (Write as many ideas about the topic as can be recalled in a short time.)
- Factstorming (Hennings, 1982) (List students’ known facts about the topic.)
- 10 Most Important Words (Stephens & Brown, 2000; Yopp & Yopp 2002) (For topics that are somewhat familiar to students, predict or select from a list those that will be the most important to the topic.)
- Drawings (Sketch initial ideas related to the topic; label as appropriate.)

Explore

- Use student questions (from engage phase) to guide explorations.
- Continue to record ideas, facts, and words using activities from engage phase:
  - Graphic organizers such as pictorial maps, semantic maps and Venn Diagrams
  - Word Banks
  - Brainracing (Brown, Phillips & Stephens, 1993) (Write as many ideas about the topic as can be recalled in a short time.)
- Factstorming (Hennings, 1982) (List students’ known facts about the topic.)

Develop

- Revisit activities from engage phase, checking predictions, revising to correct misconceptions, elaborate with additional information, and systematize new knowledge:
  - Data retrieval charts (Check facts and add more.)
  - Possible Sentences (Check sentences for plausibility; revise.)
  - Predict-o-grams (Revise the grams.)
  - Graphic organizers (Revise and elaborate on organizers.)
  - Drawings (Revise sketches and labels, elaborating, or create new drawings and compare.)
  - Word Banks (Revise and then manipulate terms to reflect new understandings through strategies such as word sorts or List, Group, Label [Taba, 1967].)

- Pursue vocabulary development as primary objective:
- Semantic Feature Analysis (e.g., Pittelman, 1991) (Chart features of important concepts.)
- OPIN (Vacca & Vacca, 1999, citing Frank Greene) (Students argue for their choice of terms to complete a cloze passage.)
- Sketch-to-Stretch (Short, Harste & Burke; 1996) (Draw, with an emphasis on inference.)
- Word Treasure Hunts (Haggard, 1989) (An “expert” discovers everything there is to be known about one chosen vocabulary term.)
- Vocabulary maps (Choose from many varieties. One has the categories of word, definition, picture or sentence, synonym, and antonym.)
- Analogies
- Classification of pictures or words on cards, perhaps developing glossary or cloze based on classification
- Dramatizations of terms
- Exploration word histories
- Use of reference sources to build word knowledge
Apply
- Use terms from Word Banks and other study in writing letters, books, poems, multimedia presentations, songs, and other products.
- Word Chains (Stephens & Brown, 2000) (Link terms, one to another, by explaining their semantic connections.)
- I-Search Paper (Macrorie, 1998) (Investigate new, personally relevant issues.)
- Reader’s Theater (Flynn, 2004/2005)

Faculty Footnotes
by Kathi Bartle Angus

This is destined to be one of those good news-bad news columns. The bad news, at least for the Reading Department is that Dr. Ash Bishop has announced his retirement, effective June 2007. Dr. Bishop has been a faculty member at CSUF since 1976. He has served as Professor, Associate Dean, Department Chair, and recently as Dean of the newly founded College of Education. Dr. Bishop grew up enjoying local beaches and sports programs in San Diego. He received his undergraduate and graduate degrees from San Diego State University and taught in San Diego Unified for several years. At one point he was featured in a San Diego newspaper article because of his unique role as a first grade teacher who happened to be male. Ash’s students are familiar with his passion for making sure students receive a positive start in reading as his own school beginnings were less than successful.

Dr. Bishop earned his Doctor of Education Degree from Arizona State University. His primary teaching responsibility, at CSUF, has been the elementary reading course associated with the Master of Science Degree in Education/Reading. Ash’s Read 508 class has been the starting point for hundreds of Orange County Reading Specialists over the past three decades. His major research interests have centered on the development of balanced reading programs, specifically programs that produce students who have personalized the "logic of the code" and use this code as they actively read fine literature.

Dr. Bishop has written numerous articles on reading and co-authored three texts: Teaching Phonics, Phonemic Awareness and Word Recognition; Rapid Reading for Professional Success; and a book for parents titled Ready for Reading: A Handbook for Parents of Preschoolers. He hopes to concentrate on authorship during his retirement. He has presented inservices, workshops, and seminars in hundreds of schools and districts in over thirty states. In addition, he was honored by the Orange County Reading Association for "Outstanding Contributions to Reading" and received the Margaret Lynch Area Exemplary Service Award from the California Reading Associa-

(Continued on page 6)
The College of Human Development and Community Service at CSUF named Dr. Bishop as its Distinguished Faculty Member for the 1990-91 academic year. While his friends and colleagues at CSUF wish him all the best in his retirement, he will be much missed.

The good news: While we say good-bye to Dr. Bishop in June, we will have an opportunity to hear him as keynote speaker at a very special Reading Educators’ Guild meeting in March of 2008. Next year, 2007-2008, marks the Golden Anniversary of CSUF. Many of you may have been contacted already regarding special alumni publications and activities that are being planned. The weekend of September 15, 2007 will be the kick-off of a series of special events that will last over the academic year. REG is planning to celebrate the Golden Anniversary with a series of newsletter articles that reflect on the history of the CSUF Reading Department. The culminating event will be an expanded version of our usual Winter Dinner next March. The REG board will begin planning this summer. Please contact a board member if you are interested in participating in the planning.

You are invited to a retirement celebration for
Dr. Ash Bishop
May 11—2:00 PM
Second floor patio of the Education Classroom Building (EC) at CSUF

REG Grant Applications Due

The Reading Educators Guild grant was established in 2004 to provide financial support to an REG member. The $300 grant is intended to be an adjunct to a typical classroom or professional materials budget. All applications must be submitted by May 15, 2007, to be considered for this funding round. See the REG website (readingeducatorsguild.org) for application form and submission information.

The Hancock Fund

The Hancock Fund was established to honor Dr. Deborah Osen-Hancock for her contributions to the field of reading and specifically to the Reading Department. The fund is solely for use by the CSUF Reading Clinic. Over the years, the fund has supplied books and technology for use by clinicians and students. REG would like to thank the following members for their generous contributions to the Hancock Fund: Janet Bagwell, Dr. Julie Chan, Dorothy Erick, Donna Fletcher, Debbie Gorney, Melanie Haeri, Mary Hansen, Margaret Hirsen, Brynn Kelly, Claudia Leyerle, Dr. Ruth May-Siegrist, Leslee Milch, Judy Serrano, Andrea Sward

SHHHHH! It’s a secret!

REG board members are collecting “Stories for the Story Teller.” We plan to present Ash with a collection of stories and photos celebrating his teaching when he speaks at the REG dinner in March 2008. Please consider writing a remembrance for this collection. Submissions can be, but are not limited to, a Read 508 or Read 595 memory, a story he told, or perhaps a description of how his teaching has impacted your own.

Please send your recorded memories to JoAnne Greenbaum
(jgreenbaum@fullerton.edu)
Greta Nagel Receives Outstanding CSUF Alumna Award for 2007 at REG Dinner.

In the Winter REG Newsletter members were asked to nominate a fellow CSUF Reading Program graduate who has established a body of work as a reading educator through scholarship and leadership. Dr. Greta Nagel, a professor from the Department of Teacher Education at California State University, Long Beach, now retired, was awarded CSUF Alumna of the year at the REG Winter Dinner on March 7. She earned her Ph.D. in multicultural education from the Claremont Graduate University, jointly with San Diego State University. After a career as a classroom teacher, reading specialist, and school principal, she coordinated university alternative certification programs and taught courses related to literacy and the historical, philosophical, and social foundations of education. Her classes are known to be interactive and include components of hands-on service learning.

During her career she has received a variety of awards including the California Distinguished School award, the IRA Celebrate Literacy award, a Claremont dissertation grant for Good groups: The search for social equity and instructional excellence through first-grade literacy groupings, as well as being named Outstanding Alumna of the Graduate Reading Program at California State University, Fullerton.

In addition to serving her department and college, Dr. Nagel chaired interdisciplinary, campus-wide committees at the university. She was the recent program co-chair for the Literacy and Social Responsibility SIG of the International Reading Association. She has attracted major grants to direct alternative certification work and to run cross-age tutoring projects in the Long Beach Unified School District and the Compton Unified School Districts.

Her research interests are related to social contexts for learning and literacy development, including museums as centers for informal learning. She is the author of The Tao of Teaching, The Tao of Parenting (both published by Penguin/Plume; other versions in five languages), and Effective Grouping for Literacy Instruction (Allyn & Bacon), and has published numerous articles in the field of education. She is currently preparing When Will We Ever Learn? The Story of the Great New Museum of Teaching and Learning, a volume that envisions the first world-class museum devoted to explore the past, present, and future of learning.

With the decision to throw her efforts into the MOTAL project (Museum of Teaching and Learning), Nagel has worked with groups of people at several levels to design and install the first traveling exhibits and attract museum supporters and donors. With Greta’s untiring efforts we can look forward to her vision becoming a reality.

### Commencement Reception

May 19 at 11:30 AM  
Second Floor Patio  
Education Classroom Building (EC)  
CSUF

REG and CSUF Reading Faculty will co-host a reception for the class of 2007 and their families immediately following commencement. If you would like to help with the reception, or attend, please contact Kathi Bartle-Angus (kangus@fullerton.edu)
Dr. Debbie Hancock (left) and REG Scholarship Recipient Houria Hall

Dr. Ash Bishop

Items of Interest for REG Newsletter???
We would welcome your submissions to the newsletter. Please send your article via email to lovett.gc@verizon.net. Please type “REG” on the subject line of your email.
Thanks, we’d love to hear from you!
Gena Lovett, Editor