

Research Basis of the Underlying Premises of *DynaNotes™ Review Guides*

There is an abundance of research supporting the underlying premises of the *DynaNotes review guides*, including the use of:

- text organization
- graphic organizers
- vocabulary development/reinforcement
- color coding

Text Organization

In their 2010 article in *Reading Psychology*, McTigue and Slough describe the concept of text accessibility. They state that informational texts must include the following features to enable comprehension: concreteness, clear author's voice, coherent writing structure, proper incorporation of visual aids, and integrated visual and verbal information. Researchers Lorch, Lemarie, and Grant (2011) found that using hierarchical organization and signaling devices like headings led to quicker text searches. Similarly, a 2010 study by Cauchard, Eryolle, Cellier, and Hyna supported the use of devices like topic headings to aid in the search process.

DynaNotes review guides are all well-organized and logically structured using headings and subheadings. The guides provide signals and scaffolding so students can quickly locate information and acquire the skills and knowledge required to independently master grade-appropriate concepts. The guides and coordinating teacher CDs also incorporate visual information that enhances the text.

Graphic Organizers

Graphic organizers are visual representations of concepts and ideas. Gallavan and Kottler (2007) describe graphic organizers as visual tools that aid in the understanding, application, and organization of information. Graphic organizers can help sort information, view relationships, show meaning, and manage data.

A study of algebra students by Bob Ives (2007) showed that those participants who received instruction that included graphic organizers performed better on posttests than those who did not. Erin Fealy (2010) found in her case study of third-grade students that graphic organizers assisted students in locating and comprehending information within texts.

Graphic organizers can help English language learners and students with learning disabilities. Ives and Hoy (2003) assert that graphic organizers can be used when traditional instruction emphasizes language skills that the students do not possess. A study conducted by J. Stacey (2001) resulted in increased quiz scores when students with learning disabilities used advanced organizers and guided notes to review geography content.

DynaNotes review guides incorporate graphic organizers including tables, diagrams, models, and maps to help students comprehend and organize key concepts and skills.

Vocabulary Development/Reinforcement

Research recommends vocabulary development and reinforcement for all students. A study of 21 sixth-grade classrooms by Kelley, Lesaux, Kieffer, and Faller (2010) showed that teaching academic vocabulary in meaningful and systematic ways helped to improve students' vocabulary and reading comprehension.

Madeline Kovarik (2010) states that vocabulary instruction is critical in content areas, and particularly so for economically disadvantaged students who may come to school with limited background knowledge. The research of Burgoyne, Kelly nee Hutchinson, Whiteley, and Spooner (2009) showed that the difficulties that English Language Learners have in understanding texts are related to these students' significantly lower level of vocabulary knowledge. Likewise, Jalongo and Sobolak (2011) assert that students need to be actively engaged in vocabulary development to show vocabulary gains. Those students who speak English as a second language and those who are economically disadvantaged are particularly at risk of not making vocabulary gains. Medina et al. (2007) in *Science Teacher* proposes that English Language Learners may benefit from explicit teaching of new scientific vocabulary. Sharilyn Daniels' 2009 study found that English Language Learners showed gains when they were provided with intervention that included exposure to vocabulary words, definitions, model sentences, and context.

DynaNotes review guides provide definitions for key content area vocabulary words. The accompanying examples and images help reinforce vocabulary in appropriate contexts.

Color Coding

Valerie Kirschenbaum states in her 2006 *Educational Leadership* article that today's texts must compete with more visually exciting modern media forms like movies, television, and the Internet. To do this she suggests designing instructional materials with colored words, varied font sizes, and colorful imagery. She claims this will greatly improve student achievement and engagement. Her ideas are supported by the research work of Ozcelik, Karakus, Kursun, and Cagiltay (2009). Their study of fifty-two participants showed that the use of color coding increased retention and performance. Color coding helped the participants more efficiently locate important information.

DynaNotes review guides and the coordinating teacher CDs color code key vocabulary words, definitions, and examples. The accompanying colorful visual models, images, and examples are also intended to increase comprehension and interest.

References

Burgoyne, K., Kelly nee Hutchinson, J. M., Whiteley, H. E., & Spooner, A. (2009). The comprehension skills of children learning English as an additional language. *British Journal of Educational Psychology*, 79(4), 735-747.

Cauchard, F., Eryolle, H., Cellier, J., & Hyona, J. (2010). Visual signals vertically extend perceptual span in searching a text: A gaze-contingent window study. *Discourse Processes: A Multidisciplinary Journal*, 47(8), 617-640.

Daniels, S. F. (2009). Teaching Vocabulary to English Language Learners (Masters thesis, Biola University, 2009). *Eric Online ED508771*.

Fealy, E.M. (2010). Explicit Instruction of Graphic Organizers as an Informational Text Reading Comprehension Strategy: Third-Grade Students' Strategies and Perceptions (Doctoral Dissertation, Fordham University, 2010). *Eric Online, ED519179*.

Gallavan, N. P. & Kottler, E. (May-Jun 2007). Eight types of graphic organizers for empowering social studies students and teachers. *Social Studies*, 98(3), 117-123.

Ives, B. (2007). Graphic organizers applied to secondary algebra instruction for students with learning disorders. *Learning Disabilities Research & Practice*, 22(2), 110-18.

Ives, B. & Hoy, C. (2003). Graphic organizers applied to higher-level secondary mathematics. *Learning Disabilities: Research & Practice*, 18(2), 36-51.

Jalongo, M.R. & Sobolak, M. J. (2011). Supporting young childrens' vocabulary growth: The challenges, the benefits, and evidence-based strategies. *Early Childhood Education Journal*, 38(6), 421-429.

Kelley, J. G., Lesaux, N. K., Kieffer, M. J., & Daller, S. E. (2010). Effective academic vocabulary instruction in the urban middle school. *Reading Teacher*, 64(1), 5-14.

Kirschenbaum, V.R. (2006). The old way of reading and the new. *Educational Leadership*, 63(8), 47-50.

Kovarik, M. (2010). Building mathematics vocabulary. *International Journal for Mathematics Teaching and Learning*, October 2010.

Lorch, R., Lemarie, J., & Grant, R. (2011). Signaling hierarchical and sequential organization in expository text. *Scientific Studies of Reading*, 15(3), 267-284.

McTigue, E. M. & Slough, S. W. (2010). Student-accessible science texts: Elements of design. *Reading Psychology*, 31(3), 213-227.

Medina-Jerez, W., Clark D., Medina, A., & Ramirez-Marin, F. (2007). Science for ELLs: Rethinking our approach. *Science Teacher*, 74(3), 52-56.

Ozcelik, E., Karakus, T., Kursun, E., & Cagiltay, K. (2009). An eye-tracking study of how color coding affects multimedia learning. *Computers & Education*, 53(2), 445-453.

Stacey, J. (2001). The Effects of Combined Content Enhancements on the Performance of Students with Learning Disabilities (Masters thesis, 2001). *ERIC Online, ED458765*.