Reading strategies teachers say they use

Arlene L. Barry

A survey determined content area teachers' favorite strategies and why they used them.

One of the undergraduate courses for which I have primary responsibility at my institution is entitled Teaching Reading in the Content Area. It is the only literacy course middle and secondary preservice teachers are required to take. Required courses are not always easy to teach, and the content specialists (social studies, science, English, mathematics, foreign language) who take my course would rather focus on their content area. In order to maintain student interest I must frequently reexamine my curriculum and my personal motivation for teaching this course. Do I choose the elements of my curriculum because I have the academic freedom to make that choice? Do I teach what I do because it is part of my job description and I am required to do so? Do I teach what I do because I truly believe it is important and relevant? Fortunately I am able to say yes to all of these questions. However, I am most passionate about the third one because I have a son, George, who has a learning disability. George is bright, athletic, and social, but for all of his 14 years reading has been a struggle and the thought of reading out loud in class, painful. "My heart starts to pound," he said, "and my hands get all sweaty when I have to read. I get so nervous I can hardly think."

I look at each one of my students as George's future teacher, the person with the power to help or humiliate, and it is easy for me to teach with passion. Does my earnestness transfer and stay with them, I have wondered, or do they learn and use the strategies to pass my course but forget them when faced with the demands of their own classroom? I decided to ask. It was time to find out if the material I taught was being applied and, if so, which strategies and methods were being used most frequently. (*Strategy* here is defined as "a systematic plan, consciously adapted and monitored to improve one's performance in learning," Harris & Hodges, 1995, p. 244.) If students did not remember my course, or anything I taught, I needed to change. If I was really going to help prepare teachers to help children like my son it was time for me to honestly reflect.

Barry teaches at the University of Kansas (447 Joseph R. Pearson Hall, 1122 West Campus Road, Lawrence, KS 66045, USA). E-mail: abarry@ku.edu.

Background

In my content area reading class we examine a variety of literacy strategies and supporting research (see Sidebar). While I agree with Moje, Young, Readence, and Moore (2000), that adolescent literacy extends beyond school-based work, and assure the reader that my course is broader than strategies, strategy use is the focus here. One goal of content reading is comprehension, and, as Fielding and Pearson (1994) noted, one of the biggest success stories of the research of the 1980s is that "this research showed over and over again that comprehension can in fact be taught" (p. 5) and "that comprehension strategy instruction was

10/02 JAAL #7 art. Barry 8/21/02 9:06 AM Page 133   (Black plate)

Education

Reading strategies teachers say they use

BIBLIOGRAPHY FOR STRATEGIES

The following are three major resources that I have found especially helpful for providing research-based information on instructional strategies.

Barr, R., Kamil, M.L., Mosenthal, P., & Pearson, P.D. (1996). (Eds.). *Handbook of reading research: Vol. 2.* Mahwah, NJ: Erlbaum. See especially Chapter 33: Secondary school reading.

Kamil, M.L., Mosenthal, P.B., Pearson, P.D., & Barr, R. (2000). (Eds.). *Handbook of reading research: Vol. 3.* Mahwah, NJ: Erlbaum.

Report of the National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction.* (NIH Pub. No. 00-4754). Washington, DC: U.S. Department of Education. See especially Chapter 4: Comprehension.

The following more specific references are personal favorites, often seminal studies, that I have found especially useful in my own teaching. These references are by no means exhaustive, and there are other instructional strategies not included in this list. Categories could logically be combined and others added. The following represent references for the instructional strategies used in this survey.

Visual aids/mental images
(Mental images, images, photos, slides, videos, charts, graphs, diagrams)

Barry, A.L. (1997). Visual art enhances the learning of Shakespeare. *Education*, *117*, 632–639.

Barry, A.L., & Villeneuve, P. (1998). Veni, Vidi, Vici: Interdisciplinary learning in the art museum. *Art Education*, *51*(1), 16–24.

Kamil, M.L., Intrator, S.M., & Kim, H.S. (2000). The effects of other technologies on literacy and literacy learning. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research: Vol. 3* (pp. 774–776). Mahwah, NJ: Erlbaum.

Pressley, M., with Wharton-McDonald, R. (1998). The development of literacy, Part 4: The need for increased comprehension in upper-elementary grades. In M. Pressley (Ed.), *Reading instruction that works: The case for balanced teaching* (pp. 192–227). New York: Guilford Press. (Constructing mental images as a common transactional strategy)

Analogy
(Comparisons established between the new and known)

Blachowicz, C., & Fisher, P. (2000). Vocabulary instruction. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research: Vol. 3* (pp. 503–523). Mahwah, NJ: Erlbaum.

Hayes, D.A., & Henk, W.A. (1986). Understanding and remembering complex prose augmented by analogic and pictorial illustration. *Journal of Reading Behavior*, *18*, 63–77.

Graphic organizer
(Content vocabulary chart that establishes relationships among concepts)

Alvermann, D.E. (1981). The compensatory effect of graphic organizers on descriptive text. *Journal of Educational Research*, *75*, 44–48.

Bean, T.W., Singer, H., Sorter, J., & Frazee, C. (1986). The effect of metacognitive instruction in outlining and graphic organizer construction on students' comprehension in a tenth-grade world history class. *Journal of Reading Behavior*, *18*, 153–169.

Berkowitz, S.J. (1986). Effects of instruction in text organization on sixth-grade students' memory for expository reading. *Reading Research Quarterly*, *21*, 161–178.

Clarke, J., Martell, K., & Willey, C. (1994, March/April). Sequencing graphic organizers to guide historical research. *The Social Studies*, 70–75.

BIBLIOGRAPHY FOR STRATEGIES (continued)

Notetaking

Berkowitz, S.J. (1986). Effects of instruction in text organization on sixth-grade students' memory for expository reading. *Reading Research Quarterly*, *21*, 161–178.

Rinehart, S.D., Stahl, S.A., & Erickson, L.G. (1986). Some effects of summarization training on reading and studying. *Reading Research Quarterly*, *21*, 422–438.

Slater, W.H., Graves, M.F., & Piche, G.L. (1985). Effects of structural organizers on ninth-grade students' comprehension and recall of four patterns of expository text. *Reading Research Quarterly*, *20*, 189–202.

Writing to learn
(Journals, exploratory writing, research, notes, summaries)

Blachowicz, C., & Fisher, P. (2000). Vocabulary instruction. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research: Vol. 3* (pp. 503–523). Mahwah, NJ: Erlbaum.

Gaskins, I.W., & Guthrie, J.T. (1994). Integrating science, reading, and writing: Goals, teacher development, and assessment. *Journal of Research in Science Teaching*, *31*, 1039–1056.

Rosenshine, B., Meister, C., & Chapman, S. (1996). Teaching students to generate questions: A review of the intervention studies. *Review of Educational Research*, *66*(2), 181–221.

Wade, S.E., & Moje, E.B. (2000). The role of text in classroom learning. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research: Vol. 3* (pp. 609–627). Mahwah, NJ: Erlbaum.

Study guide

Herber, H.L. (1978). *Teaching reading in content areas* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Wood, K.D., Lapp, D., & Flood, J. (1992). *Guiding readers through text: A review of study guides.* Newark, DE: International Reading Association.

Vocabulary activities
(Morphemic analysis, context clues, semantic feature analysis, analogies, imagery, mnemonics, multiple sources, multiple exposures)

Blachowicz, C., & Fisher, P. (1996). *Teaching vocabulary in all classrooms.* Columbus, OH: Prentice-Hall.

Blachowicz, C., & Fisher, P. (2000). Vocabulary instruction. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research: Vol. 3* (pp. 503–523). Mahwah, NJ: Erlbaum.

Anticipation guide
(Taps into prior knowledge and helps dispel misconceptions)

Duffelmeyer, F.A., Baum, D.D., & Merkley, D.J. (1987). Maximizing reader-text confrontation with an extended anticipation guide. *Journal of Reading*, *31*, 146–150.

Duffelmeyer, F., & Baum, D.D. (1992). The extended anticipation guide revisited. *Journal of Reading*, *35*, 654–656.

Hynd, C.R., & Alvermann, D.E. (1985). *The role of refutation text in overcoming difficulty with science concepts.* (ERIC Document Reproduction Service No. ED264525)

Merkley, D.J. (1997). Modified anticipation guide. *The Reading Teacher*, *50*, 365–368.

Readence, J.E., Bean, T.W., & Baldwin, R.S. (1998). Prereading strategies—anticipation guides. In *Content area literacy: An integrated approach* (6th ed., pp. 159–161). Dubuque, IA: Kendall/Hunt.

```
10/02 JAAL #7 art. Barry  8/21/02  9:06 AM  Page 135    (Black plate)
```

Education

Reading strategies teachers say they use

BIBLIOGRAPHY FOR STRATEGIES (continued)

K-W-L

(What I Know, what I Want to know, what I Learned)

Ogle, D.M. (1992). KWL in action: Secondary teachers find applications that work. In E.K. Dishner, T.W. Bean, J.E. Readence, & D.W. Moore (Eds.), *Reading in the content areas: Improving classroom instruction* (3rd ed., pp. 270–281). Dubuque, IA: Kendall-Hunt.

Summarizing

Berkowitz, S.J. (1986). Effects of instruction in text organization on sixth-grade students' memory for expository reading. *Reading Research Quarterly*, *21*, 161–178.

Brown, A.L., Day, J.D., & Jones, E.S. (1983). The development of plans for summarizing texts. *Child Development*, *54*, 968–979.

Rinehart, S.D., Stahl, S.A., & Erickson, L.G. (1986). Some effects of summarization training on reading and studying. *Reading Research Quarterly*, *21*, 422–438.

Previewing

(Use of text aids to tap into prior knowledge)

Pressley, M., Almasi, J., Schuder, T., Bergman, J., Hite, S., El-Dinary, P.B., & Brown, R. (1992). Transactional instruction of comprehension strategies: The Montgomery County, Maryland, Sail Program. *Reading and Writing Quarterly*, *10*, 5–19.

Preview

(Book talk, prereading)

Dole, J.A., Valencia, S.W., Greer, E.A., & Wardrop, J.L. (1991). Effects of two types of prereading instruction on the comprehension of narrative and expository text. *Reading Research Quarterly*, *26*, 142–159.

Graves, M.F., Cooke, C.L., & LaBerge, M.J. (1983). Effects of previewing difficult short stories on low-ability junior high school students' comprehension, recall, and attitudes. *Reading Research Quarterly*, *18*, 262–276.

Graves, M.F., & Prenn, M.C. (1984). Effects of previewing expository passages on junior high school students' comprehension and attitudes. In J.A. Niles & L.A. Harris (Eds.), *Changing perspectives on research in reading/language processing and instruction*. 33rd yearbook of the National Reading Conference (pp. 173–177). Rochester, NY: National Reading Conference.

Question-Answer Relationships (QARs)

(Focuses on sources of answers—in text, from prior knowledge.)

Raphael, T.E. (1984). Teaching learners about sources of information for answering comprehension questions. *Journal of Reading*, *27*, 303–311.

Raphael, T.E. (1986). Teaching question-answer relationships. *The Reading Teacher*, *39*, 516–520.

Problematic situation

(Problem established to set purpose for reading)

Gaskins, I.W., & Guthrie, J.T. (1994). Integrating science, reading, and writing: Goals, teacher development, and assessment. *Journal of Research in Science Teaching*, *31*, 1039–1056.

Student-developed questions

Rosenshine, B., Meister, C., & Chapman, S. (1996). Teaching students to generate questions: A review of the intervention studies. *Review of Educational Research*, *66*, 181–221.

Singer, H. (1978). Active comprehension: From answering to asking questions. *The Reading Teacher*, *31*, 901–908.

(continued)

BIBLIOGRAPHY FOR STRATEGIES (continued)

Think-aloud

(Teacher models thinking through difficult text or problems)

Baumann, J.F., Seifert-Kessell, N., & Jones, L.A. (1992). Effect of think-aloud instruction on elementary students' comprehension monitoring abilities. *Journal of Reading Behavior*, *2*, 143–172.

Rinehart, S.D., Stahl, S.A., & Erickson, L.G. (1986). Some effects of summarization training on reading and studying. *Reading Research Quarterly*, *21*, 422–438.

Rosenshine, B., Meister, C., & Chapman, S. (1996). Teaching students to generate questions: A review of the intervention studies. *Review of Educational Research*, *66*, 181–221.

Reciprocal teaching

(Uses questions, clarification, summarization, and prediction)

Palincsar, A.S., & Brown, A.L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction*, *1*, 117–175 (Study 1).

Rosenshine, B., & Meister, C. (1994). Reciprocal teaching: A review of the research. *Review of Educational Research*, *64*, 479–530.

Rosenshine, B., Meister, C., & Chapman, S. (1996). Teaching students to generate questions: A review of the intervention studies. *Review of Educational Research*, *66*, 181–221.

Directed Reading-Thinking Activity (DR-TA)

(Uses prediction, verification, judgment, and extension)

Baumann, J.F., Seifert-Kessell, N., & Jones, L.A. (1992). Effect of think-aloud instruction on elementary students' comprehension monitoring abilities. *Journal of Reading Behavior*, *24*, 143–172.

Wilkerson, B.C. (1986). Inferences: A window to comprehension. In J.A. Niles & R.V. Lalik (Eds.), *Solving problems in literacy: Learners, teachers, and researchers*. 35th yearbook of the National Reading Conference (pp. 192–198). Rochester, NY: National Reading Conference.

Guided imagery

(Concepts explored through mental images)

Samples, R. (1977). *The wholeschool book*. Reading, MA: Addison-Wesley.

Gloss

(Marginal notes that clarify and extend text)

Jacobs, G.M. (1994). What lurks in the margin: Use of vocabulary glosses as a strategy in second language reading. *Issues in Applied Linguistics*, *5*, 115–137.

Lomika, L.L. (1998). To gloss or not to gloss: An investigation of reading comprehension online. *Language Learning and Technology*, *1*, 41–50.

Stewart, R.A., & Cross, T.L. (1991). The effect of marginal glosses on reading comprehension and retention. *Journal of Reading*, 35, *412*.

Discussion web

(Question/discussion technique)

Alvermann, D.E. (1991). The discussion web: A graphic aid for learning across the curriculum. *The Reading Teacher*, *45*, 92–99.

McTighe, J., & Lyman, F.T. (1988). Cueing thinking in the classroom: The promise of theory-embedded tools. *Educational Leadership*, *45*(7), 18–24. (Information on the "think-pair-share" discussion cycle used in discussion webs)

BIBLIOGRAPHY FOR STRATEGIES (continued)

Story impression

(Prediction writing activity based on key elements of a story)

McGinley, W.J., & Denner, P.R. (1987). Story impressions: A prereading/writing activity. *Journal of Reading, 31*, 248–253.

Intra-act

(Framework for discussion that uses summary, prediction, and evaluation)

Hoffman, J.V. (1979). The intra-act procedure for critical reading. *Journal of Reading, 22*, 605–608.

found to be especially effective for students who began the study as poor comprehenders—probably because they are less likely to invent effective strategies on their own" (p. 6). Pressley (1998) found that teachers in effective instructional programs were aware of the comprehension strategies in the research literature and selected strategies and methods that made the most sense to them. Teachers explained the strategies to their students, showed them how to use them, and helped students apply these strategies as part of in-school practice. Studies of a number of these strategies have been conducted and their use validated (e.g., Anderson, 1992; Brown, Pressley, Van Meter, & Schuder, 1996; Collins, 1991).

We follow a similar process in my class. We talk about the research, I model the strategies, and students try them out. They apply the strategies, using their own content material. According to Pressley (1998), cognitive strategies like thinking aloud, constructing images, summarizing, predicting, activating prior knowledge, questioning, clarifying, and analyzing text structure "can promote reading instruction beginning in grade 2 and continuing into high school" (p. 216). These are comprehension strategies used by excellent readers. One problem in trying to determine the strategies and methods used by my former students via a survey is that comprehension changes from a process to a checklist. However, in trying to contact and question 550 former students, the checklist served as a screening device from which future research can grow.

To begin my personal assessment, I sent letters to all former students who had completed Teaching Reading in the Content Area. I explained that I was trying to do the best job I could with the course and wanted to determine what information they were able to apply. I included the following request:

1. Please indicate the grade level and content area you currently teach, as well as the total number of years taught.

2. Examine the list included and check off any of the content reading strategies you have used thus far.

3. Rate the strategies used: 1 = not effective, 2 = effective, 3 = very effective.

4. Check the strategies you would recommend others use.

5. Include comments or remarks if you desire.

Brief descriptions of the 24 literacy strategies listed were included on a separate page. Addressed, stamped envelopes were included for return of the surveys.

Information gathering

While I assumed the most difficult part of this survey would be facing honest feedback from former students, the real frustration actually occurred in trying to track down 550 School of Education graduates. Even though 76% of the

letters mailed came back to me, only a small percentage of them were usable. Unfortunately, even with the expertise and willing assistance of the Alumni Center and the School of Education faculty and staff, 286 of the 550 mailings, or 52%, came back with staccato messages: "Moved Left No Address Unable to Forward," "Attempted, Not Known," "Not Deliverable as Addressed," or "Returned to Sender." For another small group (2%), the Alumni Center had insufficient information or deemed them "Lost." Only 123 of the letters returned contained the information I sought. However, many of the unsolicited comments were heartwarming. First of all, it was great to catch up with former students. I enjoyed hearing about their children, their trials and tribulations, and their nominations for teaching awards. Several offered further assistance "in any way possible."

There were also many positive comments about the class and its practical nature. One science teacher, for example, said, "I have found your class most helpful. I use the information and strategies on a daily basis!" Another responded, "I'm glad this survey arrived. It gives me the opportunity to tell you how useful the information was and is, as I teach Spanish…. I've shared many ideas with older teachers in my department and they love them too!" A few who returned surveys (6%) said they were not teaching. Information regarding their career choices consisted of such comments as "I am currently not teaching. I am a stay at home mom" or "I'm working and still doing the band thing." Sadly, another said, "After a horrendous first year of teaching, I've switched to a new, satisfying (both personally and financially satisfying) career. Good luck with our teachers of tomorrow."

All of those currently teaching who returned the surveys said they used at least some of the methods and strategies. Of course it is the quality of the strategy use that's more important than the quantity, but the fact that teachers are applying what we did in class and providing reflective comments is a start. Evidence of transfer

and durability (some who returned surveys have been teaching over 10 years) will allow me to move to the next step of classroom observations. Also, I realize that I am not the only professor at my university who demonstrates the use of instructional strategies. Finally, because this study involves self-report, the possibility of biased and inflated responses exists. It is with these caveats noted that I discuss survey results.
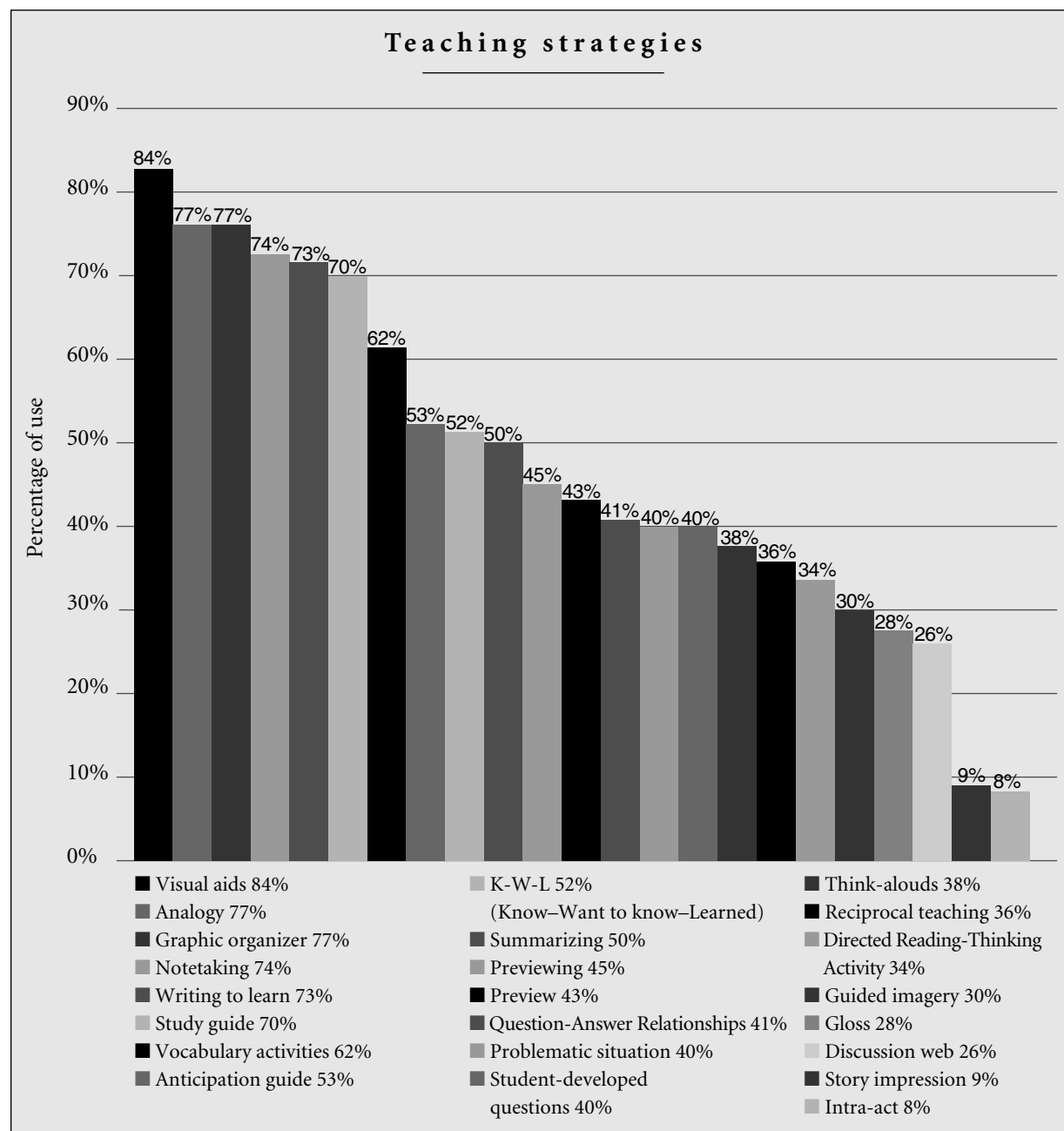
Results

Individuals listed primary teaching responsibilities in 11 different areas: social studies, English/language arts, mathematics, science, foreign language, geography, gifted, special education, theater, music, and elementary education. The number of years of teaching reported ranged from less than 1 to 12 years. About 26 teachers responded in each of the three content areas of social studies, English, and science and about 15 each in math and foreign language. Social studies and English teachers used the greatest number of strategies (an average of 13), with science, foreign language, and teachers of the gifted all averaging 12. The 16 mathematics teachers used an average of 9 instructional strategies. The lowest number of strategies used was 2, by a social studies teacher who had been teaching for 7 years. The greatest number reported was 22, by a language arts teacher who had been teaching for 12 years. The modal number of strategies used was 11 and the mean 12. Again, these strategies are not meant to be disjointed activities separate form the larger comprehension process in which students and teachers read, write, analyze, monitor, and discuss. They are all vehicles for helping students use the kinds of cognitive strategies implemented by excellent readers. Teachers noted application of the strategies listed in the Figure.

Remarks were included at some point for all strategies listed. There were clear favorites. Regarding the use of visuals, for example, teachers said things like, "An absolute must," "Indispensable," and "Always! Always! Always! I

Teaching strategies

- ■ Visual aids 84%
- ■ Analogy 77%
- ■ Graphic organizer 77%
- ■ Notetaking 74%
- ■ Writing to learn 73%
- ■ Study guide 70%
- ■ Vocabulary activities 62%
- ■ Anticipation guide 53%
- ■ K-W-L 52%
  (Know–Want to know–Learned)
- ■ Summarizing 50%
- ■ Previewing 45%
- ■ Preview 43%
- ■ Question-Answer Relationships 41%
- ■ Problematic situation 40%
- ■ Student-developed
  questions 40%
- ■ Think-alouds 38%
- ■ Reciprocal teaching 36%
- ■ Directed Reading-Thinking
  Activity 34%
- ■ Guided imagery 30%
- ■ Gloss 28%
- ■ Discussion web 26%
- ■ Story impression 9%
- ■ Intra-act 8%

challenge myself to bring in aids that use all the senses." For a related visual process, guided imagery, a biology teacher said, "Kids think it's cheesy, but they love it." Teachers felt that analogies could be used to help relate content concepts to students' lives and that students often produced very good analogies of their own. Graphic organizers were praised as "Great organizational tools" and a good way to allow students to organize chapters and review for tests. These conclu-

sions are in line with those found by Alvermann (1981) in her work with 10th graders on expository text. Teachers found that writing helped students "make some of the strongest connections" and that students "loved" a variety of vocabulary activities. Another instructional tool that students were said to "love" was the anticipation guide. Because the anticipation guide consists of text-related statements that students respond to before reading, a Spanish teacher commented that her

students "like to see how well they did after read-ing" and that "they also search for the correct an-swers." A language arts teacher found it to be an "excellent lead-in for a debate." While overall use was less frequent, individual teachers also provid-ed supportive comments for Question-Answer Relationships, reciprocal teaching, and Directed Reading-Thinking Activities.

Criticisms of strategies were actually infre-quent and generally more related to the process and the time required for implementation. For ex-ample, when referring to writing strategies one chemistry teacher said, "With 110 kids, I only do [writing] when I have lots of time." Question-Answer Relationships were also noted as being "time consuming." Referring to summary writing, another chemistry teacher said, "students tend to simply rewrite text, [they] must be carefully moni-tored." A second-year biology teacher did say he found use of mapping, specifically concept maps, negative for both students and himself. While he rated maps "effective," he said, "Kids *hate* them. I find them difficult to assess." He added, though, "Love the theory behind them." Some other strategies students disliked but teachers found useful were vocabulary ("kids hate it, but they need to learn it") and study guides ("boring, but helpful"). Teachers described using a range of study guides: "concept guides," "pattern guides," "three-level guides," "guides that came from the publisher," "guides I make up...you'd probably call them selective guides." Surprisingly, if teachers rat-ed a strategy "not effective," they concluded (as did one second-year French teacher) that it was "due to my use of the strategies, not inherent problems with the strategies." Also, many teachers noted interest in trying strategies they had not gotten to yet: "No, haven't tried it yet, but I should. I will." Sensibly, teachers noted that they adjust procedures to suit their needs and the needs of their students. For example, one teacher incorporated a variety of different questioning ap-proaches in her "Socratic seminar." Another said, "I may use this a little differently but it's a great teaching technique." Also, I agree with the world history teacher who summarized, "No one strate-

gy, in my opinion, is very effective alone. I feel it is important to use a variety."

To the question about barriers to the imple-mentation of strategies, one response was over-whelming: time. An English teacher's comments are representative of many: "I think the main bar-rier to using any technique is time, time to plan, prepare, etc. It is often easier and less demanding to just lecture when you get so bogged down." Related to this issue of time is the pressure middle and high school teachers feel to cover all the re-quired material. A language arts teacher with 12 years' experience pointed out that the need for teachers to repeatedly model strategies, "even sim-ple ones, like creating a good question," cuts down on the material that can be covered. Other teach-ers noted "lack of motivation" and limited prepa-ration as additional barriers. One social studies teacher lamented that the "emphasis in many buildings is on reading and writing. I feel I need more instruction in how to teach kids to write." Basic as well as in-depth understanding of strate-gies is certainly necessary if teachers are to imple-ment them in their classrooms. As Anderson and Roit (1993) pointed out, "Teachers who think of an approach in superficial, procedural terms quickly abandon it, even when they are initially enthusiastic.... Teachers must fully understand an intervention if they are to implement it successful-ly" (p. 133). "Tricks of the trade" do not work. Teachers must be engaged in learning-based rather than activity-based instruction to help their students truly learn to process text.

One final barrier became evident as I ob-served preservice teachers during student teach-ing and internship: confidence. When these teachers in practicum were concerned about los-ing control, they tossed out information and ac-tivities at record speed. They seemed to feel that if there wasn't a second of inactivity they could avoid student misbehavior. It takes time to feel comfortable enough in a classroom to slow down and allow quiet time to predict, question, sum-marize, visualize, and think aloud. As a matter of fact, Bean, Singer, Sorter, and Frazee (1986)

10/02 JAAL #7 art. Barry 8/21/02 9:06 AM Page 141   (Black plate)

Education

Reading strategies teachers say they use

concluded that "it takes time, indeed, as much as a year for students to internalize a new study strategy" (p. 161). Slowing down and taking more time to model, discuss, and learn a limited number of these strategies is the change this study brought about in my own teaching.

Helping all students comprehend

Historically, adolescents who struggled with reading have been "discourage[ed] continuously by low grades and criticisms" (Trabue, 1934, p. 9) until they dropped out. Living with my own son's current educational experiences, I sometimes feel things have not changed all that much. As a former middle and high school teacher, I know a teacher's load is heavy and that working with students who struggle with reading is time consuming. I also know that most middle and high school teachers are themselves expert learners, enamored of their content, who have difficulty putting themselves in the shoes of one with reading difficulties. Content reading courses have, in my opinion, been a godsend for teachers of the adolescents who fall into the National Assessment of Educational Progress Basic achievement level. Unfortunately, such courses have been slow to take hold. Only 9 of 50 states in the U.S. required one reading course for secondary certification prior to 1980 (Mangieri & Kemper, 1979); 12 states required one in 1980 (Maxworthy, 1984); and 25 states in 1993 (Barry, 1994). However, with information on reading processes, materials, and strategies that such courses provide, middle and high school teachers now have the awareness and tools available to help all of their students comprehend. These include students like my son, for whom help is essential, and all others facing challenging new texts. With time to gain confidence and solidify management, the process can begin. It is an ongoing process, though, because as one social studies teacher confided, "As an undergrad you have no idea how important reading is in *every* classroom. Perhaps I should have

paid much better attention in class!" She continued on a note that made me feel that some of my instruction was being applied: "I have referred to my content area reading text *many* times. I'd like an inservice to refresh these techniques."

Hang in there, George; help is on the way!

REFERENCES

Alvermann, D.E. (1981). The compensatory effect of graphic organizers on descriptive text. *Journal of Educational Research*, *75*, 44–48.

Anderson, V. (1992). A teacher development project in transactional strategy instruction for teachers of severely reading-disabled adolescents. *Teaching and Teacher Education*, *8*, 391–403.

Anderson, V., & Roit, M. (1993). Planning and implementing collaborative strategy instruction for delayed readers in grades 6–10. *The Elementary School Journal*, *94*, 121–137.

Barry, A.L. (1994). The staffing of high school remedial reading programs in the United States since 1920. *Journal of Reading*, *38*, 14–22.

Bean, T.W., Singer, H., Sorter, J., & Frazee, C. (1986). The effect of metacognitive instruction in outlining and graphic organizer construction on students' comprehension in a tenth-grade world history class. *Journal of Reading Behavior*, *18*, 153–169.

Brown, R., Pressley, M., Van Meter, P., & Schuder, T. (1996). A quasi-experimental validation of transactional strategies instruction with low-achieving second grade readers. *Journal of Educational Psychology*, *88*, 18–37.

Collins, C. (1991). Reading instruction that increases thinking abilities. *Journal of Reading*, *34*, 510–516.

Fielding, L.G., & Pearson, P.D. (1994). Synthesis of research: Reading comprehension: What works. *Educational Leadership*, *51*(5), 62–67.

Harris, T.L., & Hodges, R.E. (Eds.). (1995). *The literacy dictionary: The vocabulary of reading and writing*. Newark, DE: International Reading Association.

Mangieri, J.N., & Kemper, R.E. (1979). Reading: Another challenge for teacher education. *Journal of Teacher Education*, *30*(6), 11–12.

Maxworthy, A. (1984). Reading requirements for secondary certification. Unpublished raw data.

Moje, E.B., Young, J.P., Readence, J.E., & Moore, D.W. (2000). Reinventing adolescent literacy for new times: Perennial and millenial issues. *Journal of Adolescent & Adult Literacy*, *43*, 400–410.

Pressley, M. (1998). *Reading instruction that works: The case for balanced teaching*. New York: Guilford Press.

Trabue, M.R. (1934). Reading ability in the high school. *The High School Journal*, *17*(1), 9–13.